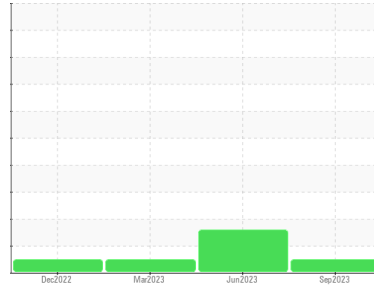




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**KAESER CSD 100S 8527366 (S/N 1152)**

Component  
**Compressor**

Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

The amount and size of particulates present in the system are acceptable. 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 |             |            | <b>KC124530</b>    | KC103357    | KC112447    |
| Sample Date        | Client Info |             |            | <b>19 Sep 2023</b> | 19 Jun 2023 | 14 Mar 2023 |
| Machine Age        | hrs         | Client Info |            | <b>4901</b>        | 3830        | 2681        |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 1149        | 2681        |
| Oil Changed        | Client Info |             |            | <b>N/A</b>         | Not Changd  | Changed     |
| Sample Status      |             |             |            | <b>NORMAL</b>      | ABNORMAL    | NORMAL      |

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >50        | <b>&lt;1</b> | 0        | 0        |
| Chromium    | ppm | ASTM D5185m | >10        | <b>0</b>     | 0        | 0        |
| Nickel      | ppm | ASTM D5185m | >3         | <b>0</b>     | 0        | 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>&lt;1</b> | <1       | <1       |
| Lead        | ppm | ASTM D5185m | >10        | <b>0</b>     | 0        | 0        |
| Copper      | ppm | ASTM D5185m | >50        | <b>12</b>    | 6        | 10       |
| Tin         | ppm | ASTM D5185m | >10        | <b>0</b>     | 0        | 0        |
| Vanadium    | ppm | ASTM D5185m |            | <b>0</b>     | <1       | 0        |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |

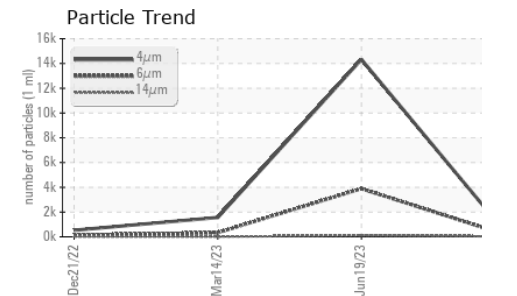
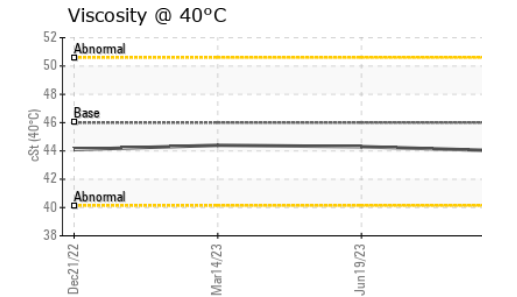
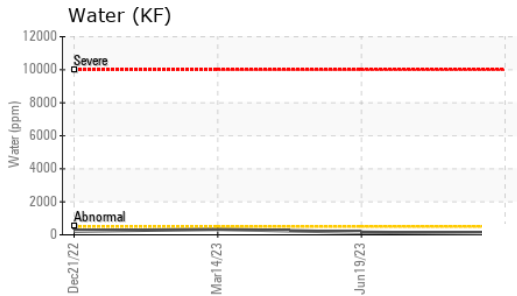
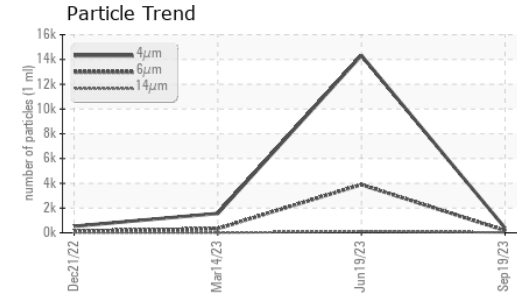
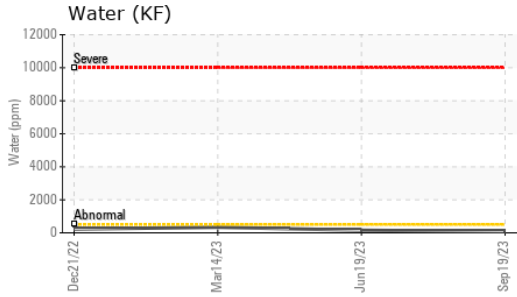
| ADDITIVES  |     | method      | limit/base | current   | history1 | history2 |
|------------|-----|-------------|------------|-----------|----------|----------|
| Boron      | ppm | ASTM D5185m |            | <b>0</b>  | 0        | 0        |
| Barium     | ppm | ASTM D5185m | 90         | <b>0</b>  | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m |            | <b>0</b>  | 0        | 0        |
| Manganese  | ppm | ASTM D5185m |            | <b>0</b>  | 0        | 0        |
| Magnesium  | ppm | ASTM D5185m | 90         | <b>3</b>  | 5        | 10       |
| Calcium    | ppm | ASTM D5185m | 2          | <b>0</b>  | 0        | 0        |
| Phosphorus | ppm | ASTM D5185m |            | <b>3</b>  | 5        | 4        |
| Zinc       | ppm | ASTM D5185m |            | <b>50</b> | 35       | 25       |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>&lt;1</b> | <1       | 0        |
| Sodium       | ppm | ASTM D5185m |            | <b>&lt;1</b> | 1        | 6        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>&lt;1</b> | <1       | 3        |
| Water        | %   | ASTM D6304  | >0.05      | <b>0.008</b> | 0.015    | 0.033    |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>85.7</b>  | 155.0    | 337.8    |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1   | history2 |
|-------------------|--|--------------|------------|-----------------|------------|----------|
| Particles >4µm    |  | ASTM D7647   |            | <b>391</b>      | 14328      | 1562     |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>185</b>      | ▲ 3890     | 331      |
| Particles >14µm   |  | ASTM D7647   | >80        | <b>31</b>       | ▲ 106      | 11       |
| Particles >21µm   |  | ASTM D7647   | >20        | <b>9</b>        | ▲ 25       | 3        |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>0</b>        | 1          | 0        |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | 0          | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >--/17/13  | <b>16/15/12</b> | ▲ 21/19/14 | 18/16/11 |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.4        | <b>0.35</b> | 0.43     | 0.39     |

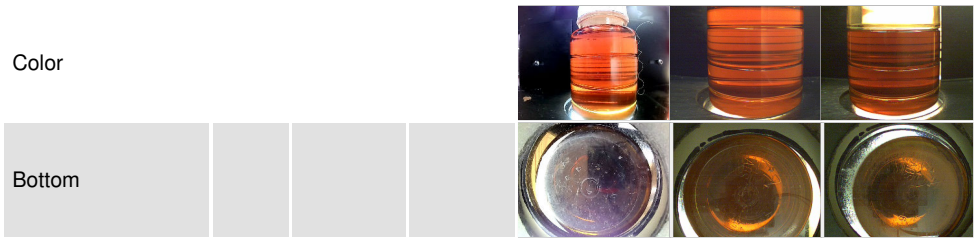
# OIL ANALYSIS REPORT



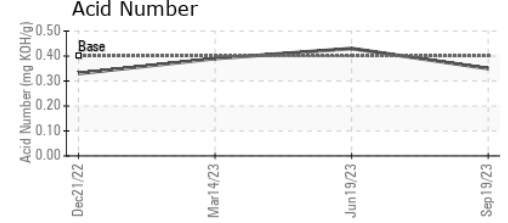
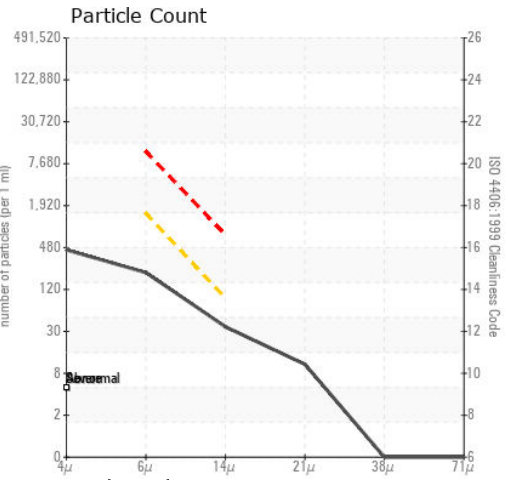
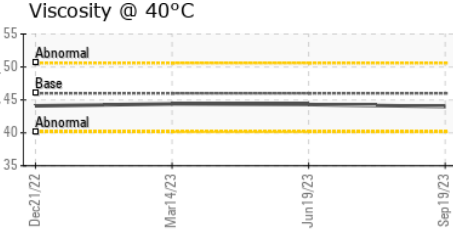
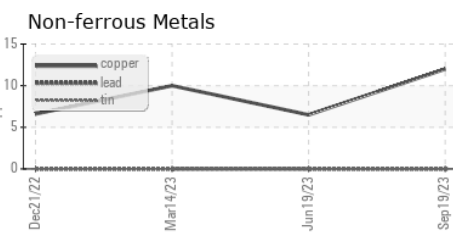
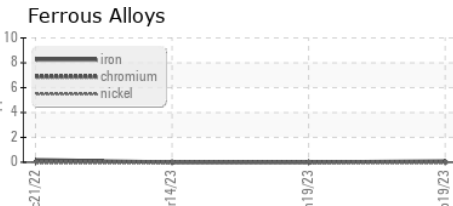
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
|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

| FLUID PROPERTIES | method | limit/base   | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 46 | 44.0    | 44.3     | 44.4     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC124530  
**Lab Number** : 05969659  
**Unique Number** : 10676210  
**Test Package** : IND 2

**EXACTECH**  
 2320 NW 66TH CT  
 GAINESVILLE, FL  
 US 35653  
 Contact:

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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F: