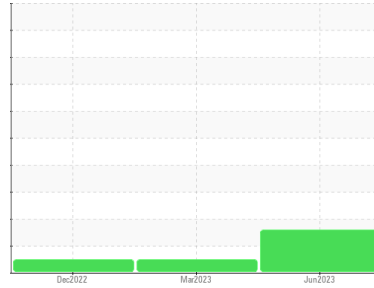




# PROBLEM SUMMARY

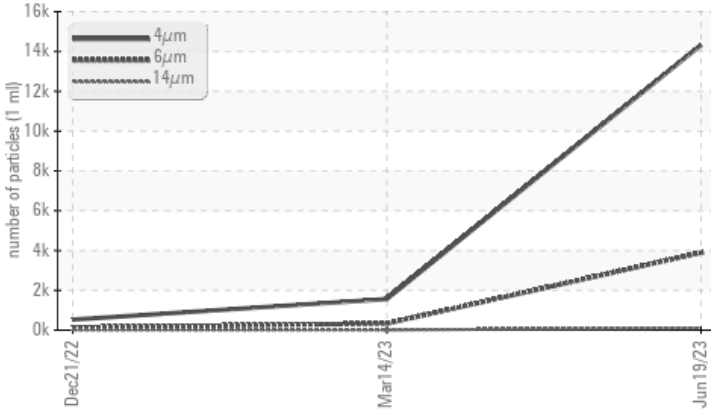
Sample Rating Trend



Machine Id  
**KAESER CSD 100S 8527366 (S/N 1152)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status   |              |           | ABNORMAL          | NORMAL   | NORMAL   |
|-----------------|--------------|-----------|-------------------|----------|----------|
| Particles >6µm  | ASTM D7647   | >1300     | ▲ <b>3890</b>     | 331      | 135      |
| Particles >14µm | ASTM D7647   | >80       | ▲ <b>106</b>      | 11       | 13       |
| Particles >21µm | ASTM D7647   | >20       | ▲ <b>25</b>       | 3        | 5        |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13 | ▲ <b>21/19/14</b> | 18/16/11 | 16/14/11 |

Customer Id: EXAGAI  
 Sample No.: KC103357  
 Lab Number: 05899327  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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                                             |
|---------------|--------|------|---------|---------------------------------------------------------|
| Change Filter | ---    | ---  | ?       | We recommend you service the filters on this component. |

## HISTORICAL DIAGNOSIS

### 14 Mar 2023 Diag: Angela Borella

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 21 Dec 2022 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

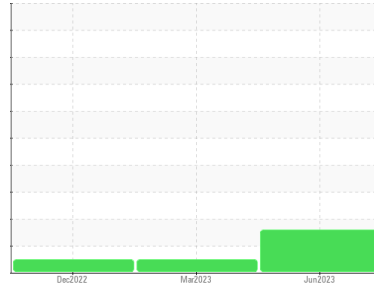
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**KAESER CSD 100S 8527366 (S/N 1152)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. 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>KC103357</b>    | KC112447    | KC108389    |
| Sample Date   | Client Info | <b>19 Jun 2023</b> | 14 Mar 2023 | 21 Dec 2022 |
| Machine Age   | hrs         | <b>3830</b>        | 2681        | 1650        |
| Oil Age       | hrs         | <b>1149</b>        | 2681        | 1650        |
| Oil Changed   | Client Info | <b>Not Chngd</b>   | Changed     | Not Chngd   |
| Sample Status |             | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

## 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>     | 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>6</b>     | 10       | 7        |
| Tin ppm      | ASTM D5185m >10 | <b>0</b>     | 0        | 0        |
| Vanadium ppm | ASTM D5185m     | <b>&lt;1</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>0</b>  | 0        | 0        |
| Molybdenum ppm | ASTM D5185m    | <b>0</b>  | 0        | 0        |
| Manganese ppm  | ASTM D5185m    | <b>0</b>  | 0        | <1       |
| Magnesium ppm  | ASTM D5185m 90 | <b>5</b>  | 10       | 32       |
| Calcium ppm    | ASTM D5185m 2  | <b>0</b>  | 0        | 0        |
| Phosphorus ppm | ASTM D5185m    | <b>5</b>  | 4        | 30       |
| Zinc ppm       | ASTM D5185m    | <b>35</b> | 25       | 25       |

## CONTAMINANTS

| method        | limit/base       | current      | history1 | history2 |
|---------------|------------------|--------------|----------|----------|
| Silicon ppm   | ASTM D5185m >25  | <b>&lt;1</b> | 0        | 2        |
| Sodium ppm    | ASTM D5185m      | <b>1</b>     | 6        | 15       |
| Potassium ppm | ASTM D5185m >20  | <b>&lt;1</b> | 3        | 16       |
| Water %       | ASTM D6304 >0.05 | <b>0.015</b> | 0.033    | 0.022    |
| ppm Water     | ASTM D6304 >500  | <b>155.0</b> | 337.8    | 228.4    |

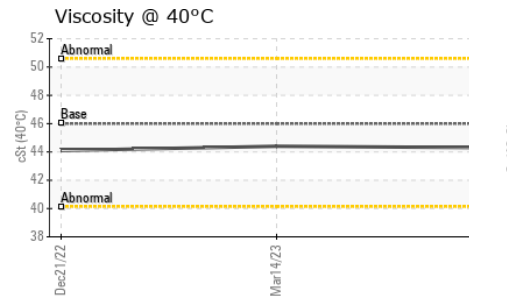
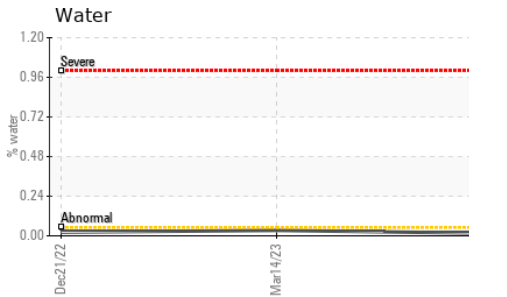
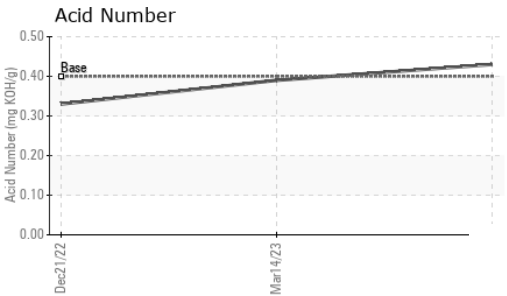
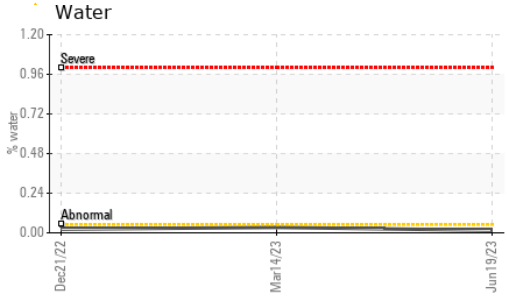
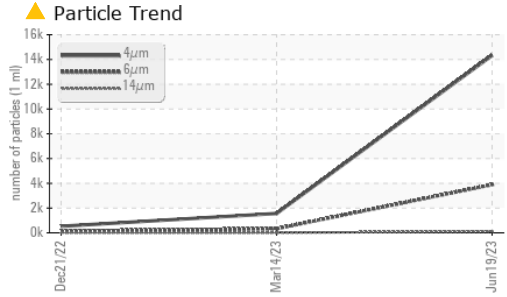
## FLUID CLEANLINESS

| method          | limit/base             | current           | history1 | history2 |
|-----------------|------------------------|-------------------|----------|----------|
| Particles >4µm  | ASTM D7647             | <b>14328</b>      | 1562     | 530      |
| Particles >6µm  | ASTM D7647 >1300       | <b>▲ 3890</b>     | 331      | 135      |
| Particles >14µm | ASTM D7647 >80         | <b>▲ 106</b>      | 11       | 13       |
| Particles >21µm | ASTM D7647 >20         | <b>▲ 25</b>       | 3        | 5        |
| Particles >38µm | ASTM D7647 >4          | <b>1</b>          | 0        | 0        |
| Particles >71µm | ASTM D7647 >3          | <b>0</b>          | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | <b>▲ 21/19/14</b> | 18/16/11 | 16/14/11 |

## FLUID DEGRADATION

| method                    | limit/base     | current     | history1 | history2 |
|---------------------------|----------------|-------------|----------|----------|
| Acid Number (AN) mg KOH/g | ASTM D8045 0.4 | <b>0.43</b> | 0.39     | 0.33     |

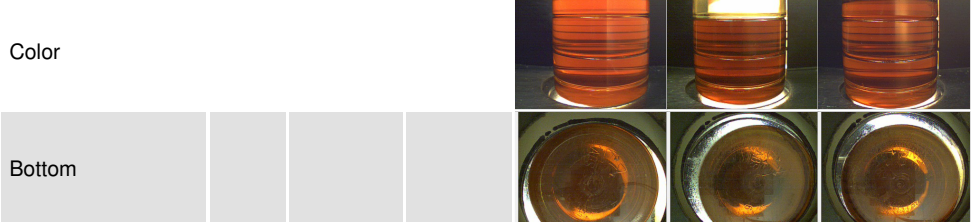
# OIL ANALYSIS REPORT



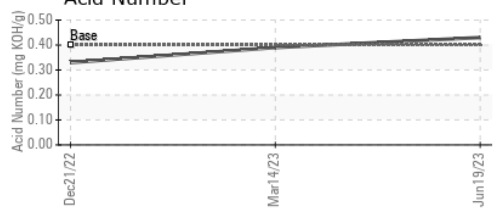
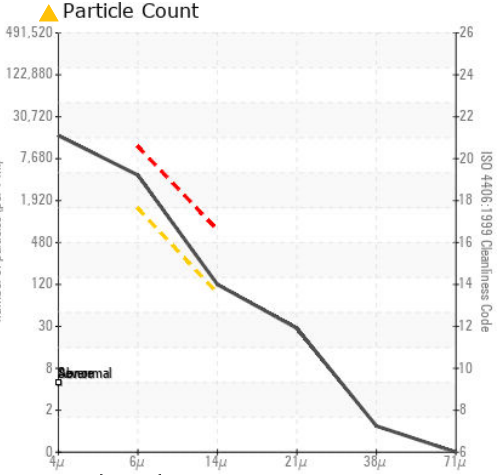
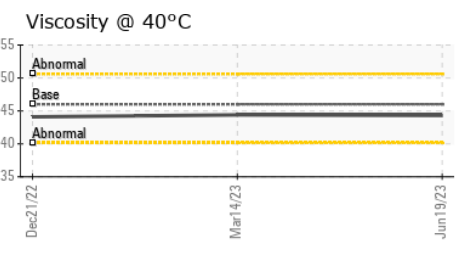
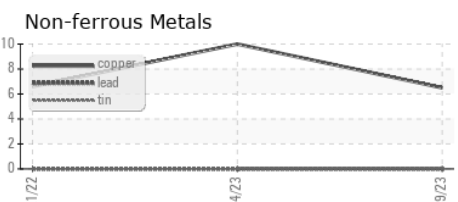
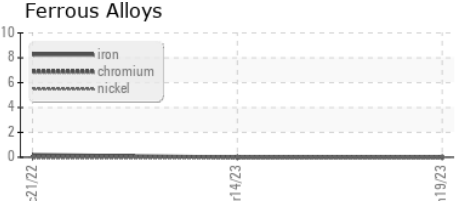
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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 | 44.3    | 44.4     | 44.1     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC103357 **Received** : 14 Jul 2023  
**Lab Number** : 05899327 **Diagnosed** : 18 Jul 2023  
**Unique Number** : 10560683 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2

**EXACTECH**  
 2320 NW 66TH CT  
 GAINSVILLE, 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)

T:  
F: