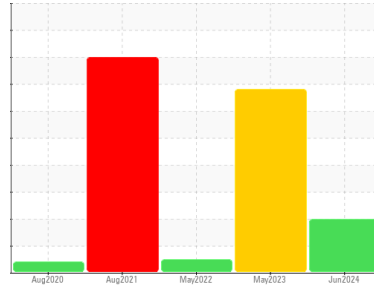




# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Machine Id  
**KAESER 7186505**

Component  
**Compressor**

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

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We recommend an early resample in 500 hours to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water 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>KC130960</b>    | KCP46225    | KC106303    |
| Sample Date        | Client Info |             |            | <b>28 Jun 2024</b> | 08 May 2023 | 20 May 2022 |
| Machine Age        | hrs         | Client Info |            | <b>4077</b>        | 2772        | 1693        |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 1072        | 500         |
| Oil Changed        | Client Info |             |            | <b>Changed</b>     | Not Changd  | Changed     |
| Sample Status      |             |             |            | <b>ABNORMAL</b>    | SEVERE      | NORMAL      |

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >50        | <b>&lt;1</b> | <1       | 0        |
| 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>     | <1       | <1       |
| Lead        | ppm | ASTM D5185m | >10        | <b>0</b>     | 0        | 0        |
| Copper      | ppm | ASTM D5185m | >50        | <b>43</b>    | 26       | 15       |
| Tin         | ppm | ASTM D5185m | >10        | <b>0</b>     | 0        | 0        |
| Antimony    | ppm | ASTM D5185m |            | <b>---</b>   | ---      | ---      |
| Vanadium    | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |

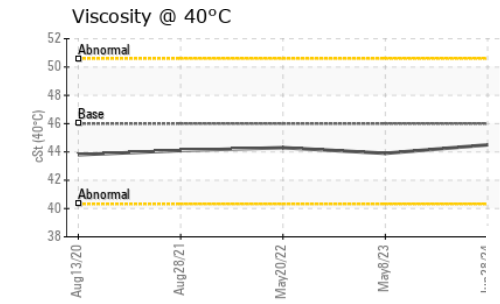
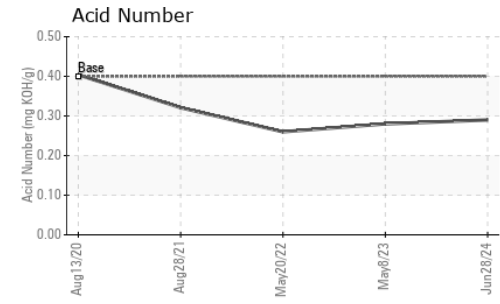
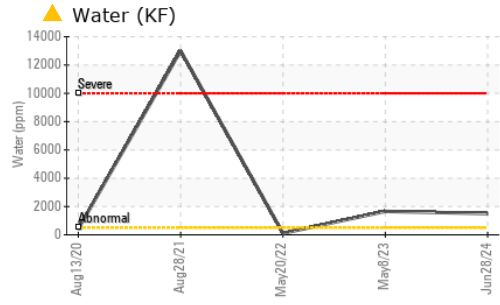
| ADDITIVES  |     | method      | limit/base | current  | history1 | history2 |
|------------|-----|-------------|------------|----------|----------|----------|
| Boron      | ppm | ASTM D5185m |            | <b>0</b> | 0        | 0        |
| Barium     | ppm | ASTM D5185m | 90         | <b>0</b> | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m |            | <b>0</b> | 0        | 0        |
| Manganese  | ppm | ASTM D5185m |            | <b>0</b> | <1       | 0        |
| Magnesium  | ppm | ASTM D5185m | 90         | <b>0</b> | 9        | 6        |
| Calcium    | ppm | ASTM D5185m | 2          | <b>0</b> | <1       | 0        |
| Phosphorus | ppm | ASTM D5185m |            | <b>0</b> | 2        | 5        |
| Zinc       | ppm | ASTM D5185m |            | <b>0</b> | 8        | 14       |

| CONTAMINANTS |     | method      | limit/base | current        | history1 | history2 |
|--------------|-----|-------------|------------|----------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>4</b>       | 2        | 5        |
| Sodium       | ppm | ASTM D5185m |            | <b>&lt;1</b>   | 2        | 5        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>&lt;1</b>   | <1       | 0        |
| Water        | %   | ASTM D6304  | >0.05      | <b>▲ 0.150</b> | ▲ 0.166  | 0.010    |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>▲ 1500</b>  | ▲ 1656   | 106.1    |

| FLUID CLEANLINESS |  | method       | limit/base | current    | history1 | history2 |
|-------------------|--|--------------|------------|------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   |            | <b>---</b> | ---      | 2971     |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>---</b> | ---      | 694      |
| Particles >14µm   |  | ASTM D7647   | >80        | <b>---</b> | ---      | 55       |
| Particles >21µm   |  | ASTM D7647   | >20        | <b>---</b> | ---      | 12       |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>---</b> | ---      | 0        |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>---</b> | ---      | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >--/17/13  | <b>---</b> | ---      | 19/17/13 |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.4        | <b>0.29</b> | 0.28     | 0.26     |

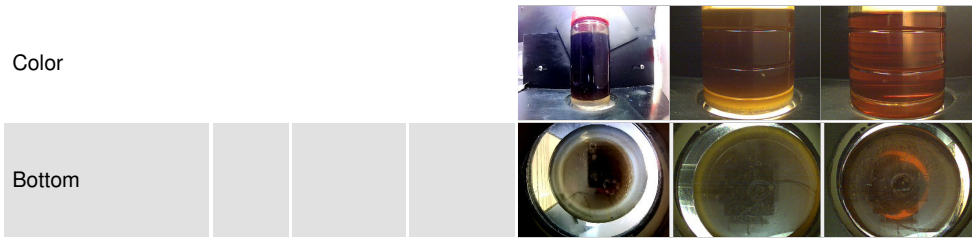
# OIL ANALYSIS REPORT



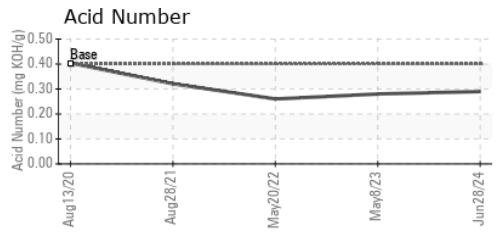
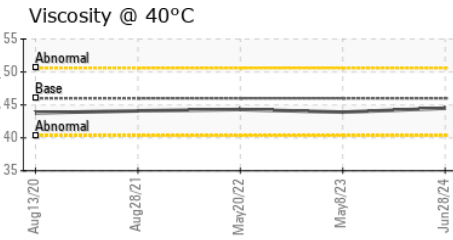
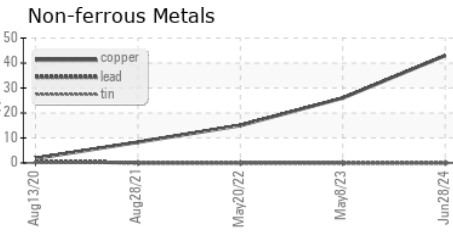
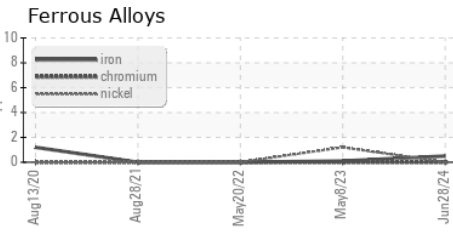
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | ▲ MODER  | ▲ MODER  |
| 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   | ▲ 0.2%   | NEG      |
| Free Water       | scalar | *Visual    |         | ▲ 1.0    | NEG      |

| FLUID PROPERTIES | method | limit/base   | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 46 | 44.5    | 43.9     | 44.3     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC130960  
**Lab Number** : 06235997  
**Unique Number** : 11124831  
**Test Package** : IND 2  
**Received** : 15 Jul 2024  
**Tested** : 17 Jul 2024  
**Diagnosed** : 17 Jul 2024 - Jonathan Hester

**PLAINVIEW CLEANERS**  
 1261 S HURSTBOURNE PKWY  
 LOUISVILLE, KY  
 US 40222  
 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: