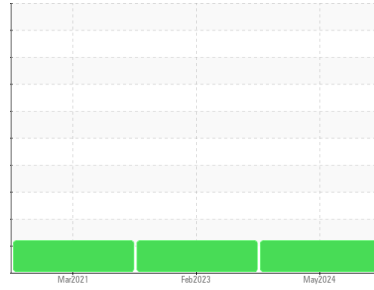




# OIL ANALYSIS REPORT

## Sample Rating Trend



ISO



Machine Id

**KAESER 7072730**

Component

**Compressor**

Fluid

**KAESER SIGMA (OEM) M-460 (--- GAL)**

### DIAGNOSIS

#### Recommendation

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

#### Wear

All component wear rates are normal.

#### Contamination

There is a moderate 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>KCPA018296</b>  | KCP46372    | KCP30806    |
| Sample Date        | Client Info |             |            | <b>16 May 2024</b> | 28 Feb 2023 | 26 Mar 2021 |
| Machine Age        | hrs         | Client Info |            | <b>12902</b>       | 8092        | 2205        |
| Oil Age            | hrs         | Client Info |            | <b>3917</b>        | 5887        | 2205        |
| Oil Changed        | Client Info |             |            | <b>Changed</b>     | Changed     | Changed     |
| Sample Status      |             |             |            | <b>ATTENTION</b>   | ATTENTION   | ABNORMAL    |

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >50        | <b>&lt;1</b> | <1       | 1        |
| Chromium    | ppm | ASTM D5185m | >10        | <b>&lt;1</b> | 0        | 0        |
| Nickel      | ppm | ASTM D5185m | >3         | <b>0</b>     | 0        | 0        |
| Titanium    | ppm | ASTM D5185m | >3         | <b>&lt;1</b> | 0        | 0        |
| Silver      | ppm | ASTM D5185m | >2         | <b>0</b>     | 0        | <1       |
| Aluminum    | ppm | ASTM D5185m | >10        | <b>2</b>     | <1       | <1       |
| Lead        | ppm | ASTM D5185m | >10        | <b>&lt;1</b> | 0        | <1       |
| Copper      | ppm | ASTM D5185m | >50        | <b>2</b>     | 8        | 4        |
| Tin         | ppm | ASTM D5185m | >10        | <b>&lt;1</b> | 0        | 0        |
| Antimony    | ppm | ASTM D5185m |            | <b>---</b>   | ---      | <1       |
| Vanadium    | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |

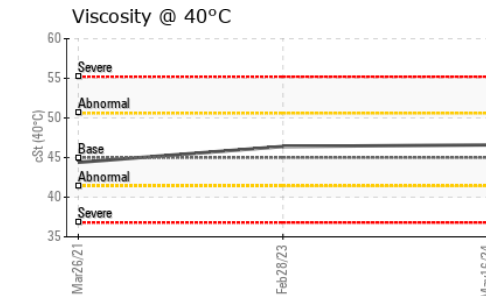
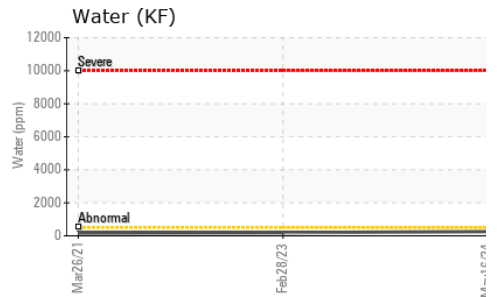
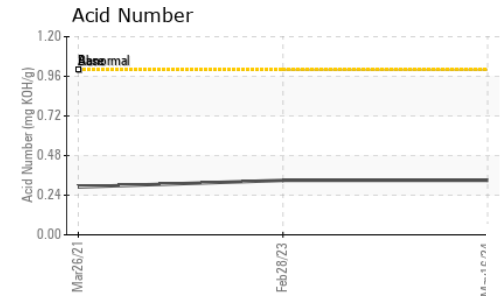
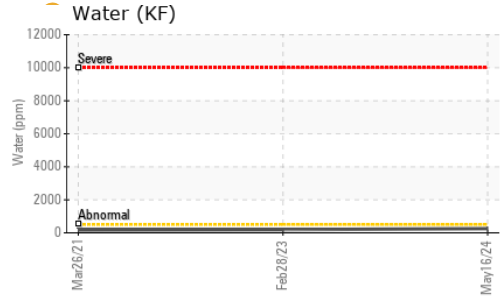
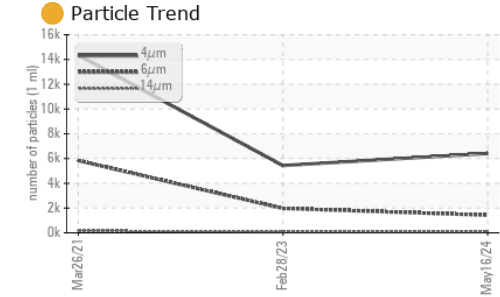
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 0          | <b>0</b>     | 0        | 9        |
| Barium     | ppm | ASTM D5185m | 90         | <b>8</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m | 0          | <b>&lt;1</b> | 0        | 0        |
| Manganese  | ppm | ASTM D5185m |            | <b>0</b>     | <1       | <1       |
| Magnesium  | ppm | ASTM D5185m | 100        | <b>80</b>    | 48       | 55       |
| Calcium    | ppm | ASTM D5185m | 0          | <b>2</b>     | 0        | 3        |
| Phosphorus | ppm | ASTM D5185m | 0          | <b>4</b>     | <1       | 6        |
| Zinc       | ppm | ASTM D5185m | 0          | <b>19</b>    | 29       | 9        |
| Sulfur     | ppm | ASTM D5185m | 23500      | <b>23047</b> | 20428    | 13530    |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>6</b>     | 2        | <1       |
| Sodium       | ppm | ASTM D5185m |            | <b>17</b>    | 10       | 16       |
| Potassium    | ppm | ASTM D5185m | >20        | <b>8</b>     | 6        | 11       |
| Water        | %   | ASTM D6304  | >0.05      | <b>0.025</b> | 0.019    | 0.017    |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>256</b>   | 191.2    | 170.9    |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   |            | <b>6415</b>     | 5436     | 14338    |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>1421</b>     | 1970     | 5834     |
| Particles >14µm   |  | ASTM D7647   | >80        | <b>100</b>      | 114      | 150      |
| Particles >21µm   |  | ASTM D7647   | >20        | <b>27</b>       | 16       | 23       |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>0</b>        | 1        | 1        |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >--/17/13  | <b>20/18/14</b> | 20/18/14 | 20/14    |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 1.0        | <b>0.33</b> | 0.33     | 0.290    |

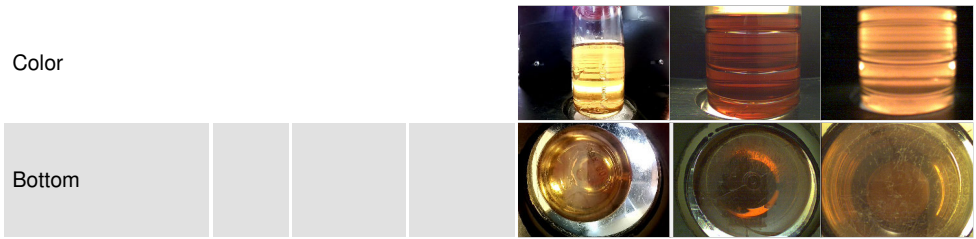
# OIL ANALYSIS REPORT



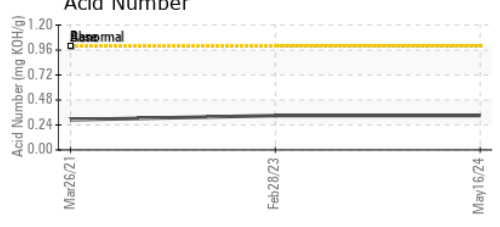
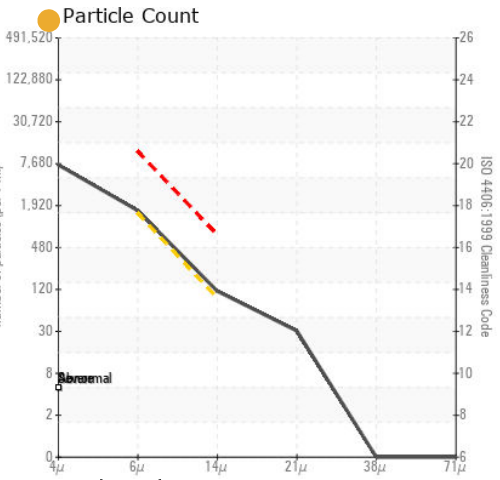
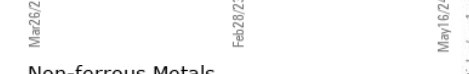
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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 45 | 46.6    | 46.4     | 44.4     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA018296 **Received** : 30 May 2024  
**Lab Number** : 06195435 **Tested** : 31 May 2024  
**Unique Number** : 11057558 **Diagnosed** : 31 May 2024 - Angela Borella  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**SALLY BEAUTY SUPPLY**  
 15453 WOLF CROSSING  
 JUSTIN, TX  
 US 76247  
 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)