



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**8687481 (S/N 1228)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) M-460 (--- QTS)**

## DIAGNOSIS

### ▲ Recommendation

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 acceptable for the time in service.

| SAMPLE INFORMATION |             | method      | limit/base | current            | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|----------|----------|
| Sample Number      | Client Info |             |            | <b>KCPA016866</b>  | ---      | ---      |
| Sample Date        | Client Info |             |            | <b>28 Mar 2024</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info |            | <b>1172</b>        | ---      | ---      |
| Oil Age            | hrs         | Client Info |            | <b>1172</b>        | ---      | ---      |
| Oil Changed        | Client Info |             |            | <b>Not Chngd</b>   | ---      | ---      |
| Sample Status      |             |             |            | <b>ABNORMAL</b>    | ---      | ---      |

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

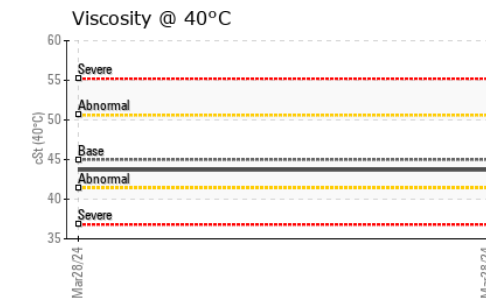
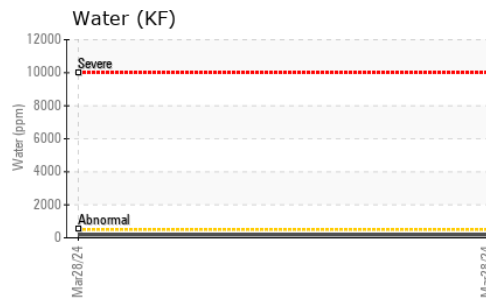
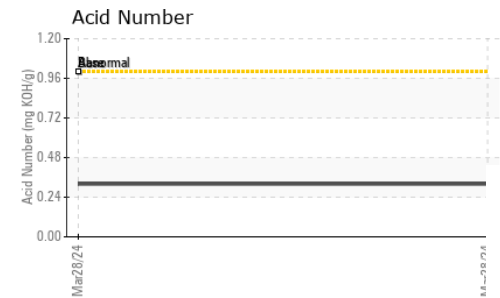
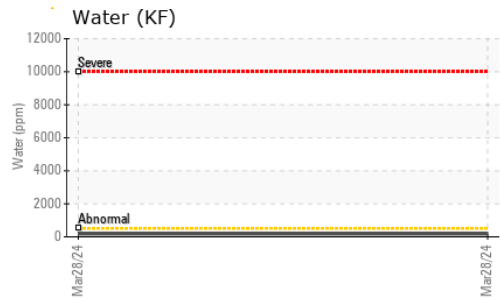
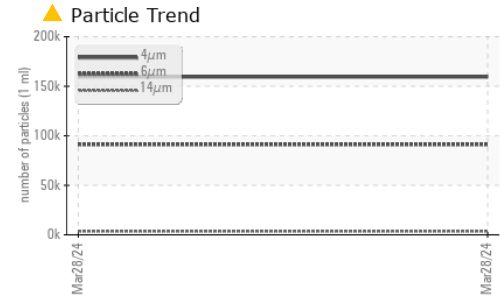
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 0          | <b>0</b>     | ---      | ---      |
| Barium     | ppm | ASTM D5185m | 90         | <b>58</b>    | ---      | ---      |
| Molybdenum | ppm | ASTM D5185m | 0          | <b>1</b>     | ---      | ---      |
| Manganese  | ppm | ASTM D5185m |            | <b>1</b>     | ---      | ---      |
| Magnesium  | ppm | ASTM D5185m | 100        | <b>74</b>    | ---      | ---      |
| Calcium    | ppm | ASTM D5185m | 0          | <b>8</b>     | ---      | ---      |
| Phosphorus | ppm | ASTM D5185m | 0          | <b>7</b>     | ---      | ---      |
| Zinc       | ppm | ASTM D5185m | 0          | <b>9</b>     | ---      | ---      |
| Sulfur     | ppm | ASTM D5185m | 23500      | <b>20576</b> | ---      | ---      |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>3</b>     | ---      | ---      |
| Sodium       | ppm | ASTM D5185m |            | <b>15</b>    | ---      | ---      |
| Potassium    | ppm | ASTM D5185m | >20        | <b>13</b>    | ---      | ---      |
| Water        | %   | ASTM D6304  | >0.05      | <b>0.018</b> | ---      | ---      |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>181</b>   | ---      | ---      |

| FLUID CLEANLINESS |  | method       | limit/base | current           | history1 | history2 |
|-------------------|--|--------------|------------|-------------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   |            | <b>159443</b>     | ---      | ---      |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>▲ 91280</b>    | ---      | ---      |
| Particles >14µm   |  | ASTM D7647   | >80        | <b>▲ 3596</b>     | ---      | ---      |
| Particles >21µm   |  | ASTM D7647   | >20        | <b>▲ 188</b>      | ---      | ---      |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>6</b>          | ---      | ---      |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>          | ---      | ---      |
| Oil Cleanliness   |  | ISO 4406 (c) | >--/17/13  | <b>▲ 24/24/19</b> | ---      | ---      |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 1.0        | <b>0.32</b> | ---      | ---      |

# OIL ANALYSIS REPORT



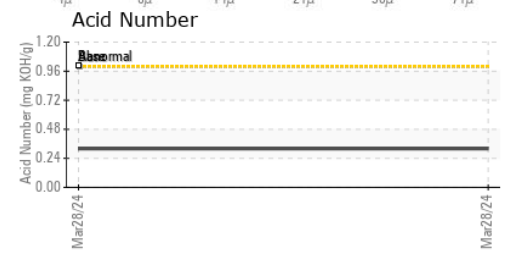
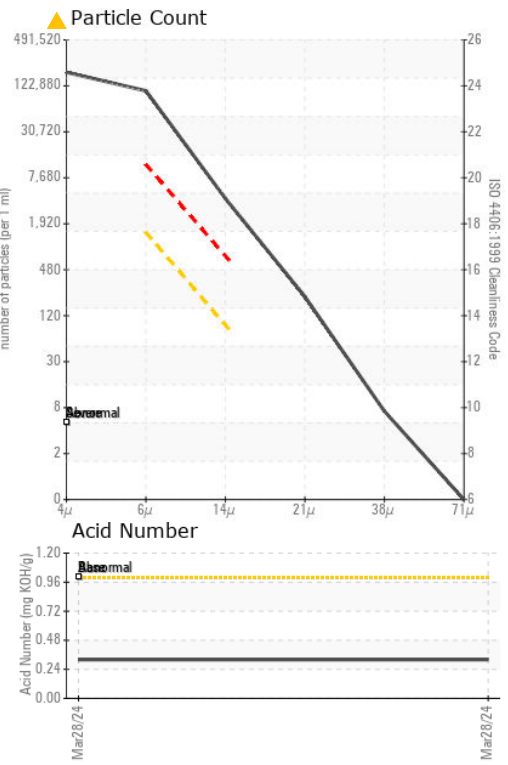
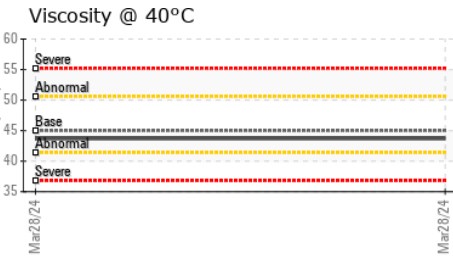
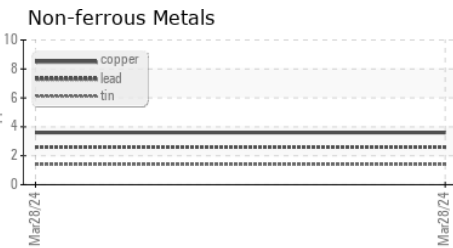
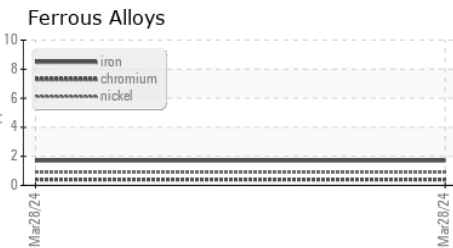
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
|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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 45      | 43.7     | ---      |

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

|        |  |          |          |
|--------|--|----------|----------|
| Color  |  | no image | no image |
| Bottom |  | no image | no image |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA016866 **Received** : 11 Apr 2024  
**Lab Number** : 06146593 **Tested** : 12 Apr 2024  
**Unique Number** : 10976671 **Diagnosed** : 15 Apr 2024 - Angela Borella  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**SMT CORP**  
 14 HIGH BRIDGE RD  
 SANDY HOOK, CT  
 US 06482  
 Contact: R. PENIOWICH  
 rpeniowich@smtcorp.com

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)