



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

**1981087 (S/N 1232)**

Component

**Compressor**

Fluid

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

## DIAGNOSIS

### ▲ Recommendation

Oil and 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>KCPA016143</b>  | ---          | ---      |
| Sample Date   | Client Info | <b>09 Apr 2024</b> | ---          | ---      |
| Machine Age   | hrs         | Client Info        | <b>45390</b> | ---      |
| Oil Age       | hrs         | Client Info        | <b>0</b>     | ---      |
| Oil Changed   | Client Info | <b>Changed</b>     | ---          | ---      |
| Sample Status |             | <b>ABNORMAL</b>    | ---          | ---      |

## WEAR METALS

| method   | limit/base | current         | history1     | history2 |
|----------|------------|-----------------|--------------|----------|
| Iron     | ppm        | ASTM D5185m >50 | <b>1</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>&lt;1</b> | ---      |
| Aluminum | ppm        | ASTM D5185m >10 | <b>3</b>     | ---      |
| Lead     | ppm        | ASTM D5185m >10 | <b>&lt;1</b> | ---      |
| Copper   | ppm        | ASTM D5185m >50 | <b>3</b>     | ---      |
| Tin      | ppm        | ASTM D5185m >10 | <b>&lt;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>&lt;1</b> | ---      |
| Molybdenum | ppm        | ASTM D5185m 0     | <b>&lt;1</b> | ---      |
| Manganese  | ppm        | ASTM D5185m       | <b>&lt;1</b> | ---      |
| Magnesium  | ppm        | ASTM D5185m 100   | <b>18</b>    | ---      |
| Calcium    | ppm        | ASTM D5185m 0     | <b>0</b>     | ---      |
| Phosphorus | ppm        | ASTM D5185m 0     | <b>0</b>     | ---      |
| Zinc       | ppm        | ASTM D5185m 0     | <b>35</b>    | ---      |
| Sulfur     | ppm        | ASTM D5185m 23500 | <b>18945</b> | ---      |

## CONTAMINANTS

| method    | limit/base | current          | history1     | history2 |
|-----------|------------|------------------|--------------|----------|
| Silicon   | ppm        | ASTM D5185m >25  | <b>19</b>    | ---      |
| Sodium    | ppm        | ASTM D5185m      | <b>5</b>     | ---      |
| Potassium | ppm        | ASTM D5185m >20  | <b>3</b>     | ---      |
| Water     | %          | ASTM D6304 >0.05 | <b>0.008</b> | ---      |
| ppm Water | ppm        | ASTM D6304 >500  | <b>86</b>    | ---      |

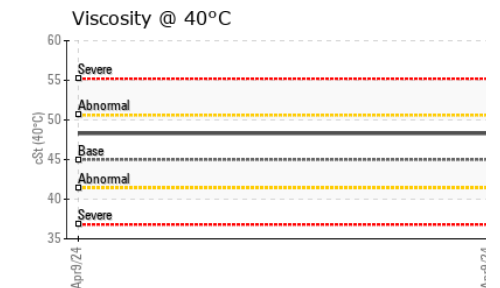
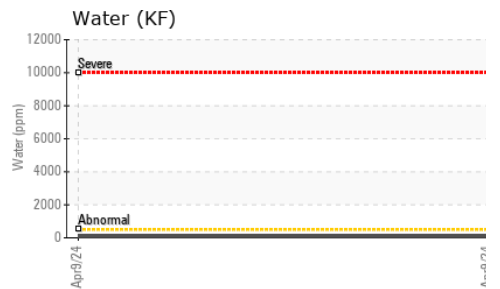
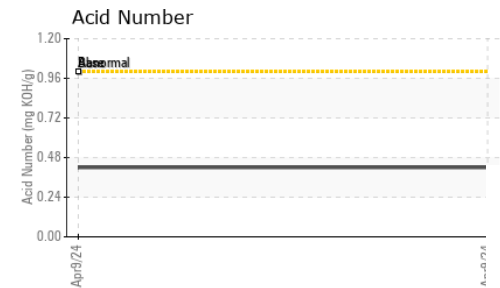
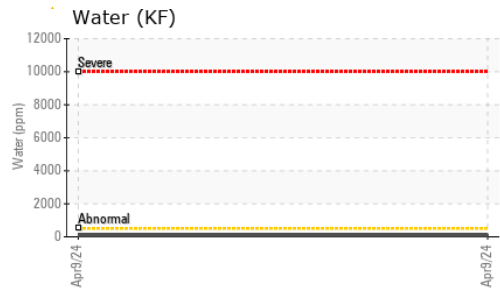
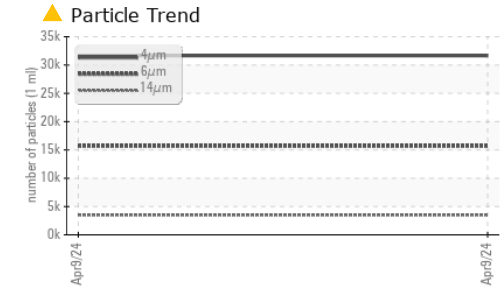
## FLUID CLEANLINESS

| method          | limit/base             | current           | history1 | history2 |
|-----------------|------------------------|-------------------|----------|----------|
| Particles >4µm  | ASTM D7647             | <b>31655</b>      | ---      | ---      |
| Particles >6µm  | ASTM D7647 >1300       | ▲ <b>15705</b>    | ---      | ---      |
| Particles >14µm | ASTM D7647 >80         | ▲ <b>3485</b>     | ---      | ---      |
| Particles >21µm | ASTM D7647 >20         | ▲ <b>1386</b>     | ---      | ---      |
| Particles >38µm | ASTM D7647 >4          | ▲ <b>103</b>      | ---      | ---      |
| Particles >71µm | ASTM D7647 >3          | <b>4</b>          | ---      | ---      |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | ▲ <b>22/21/19</b> | ---      | ---      |

## FLUID DEGRADATION

| method           | limit/base | current        | history1    | history2 |
|------------------|------------|----------------|-------------|----------|
| Acid Number (AN) | mg KOH/g   | ASTM D8045 1.0 | <b>0.42</b> | ---      |

# OIL ANALYSIS REPORT



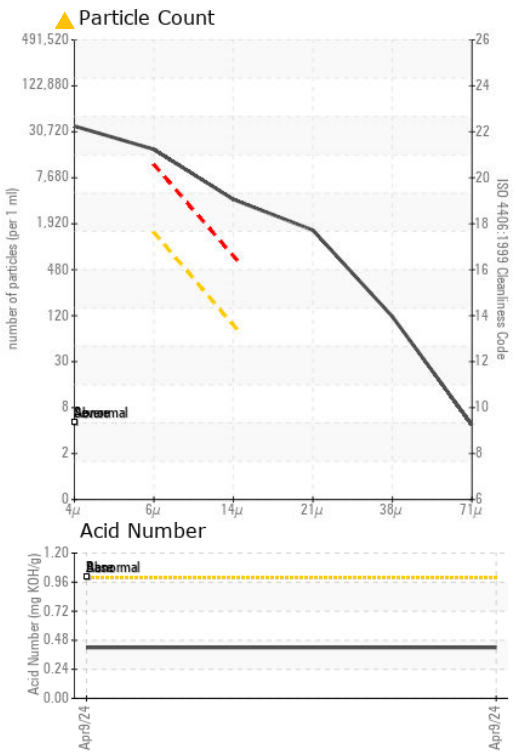
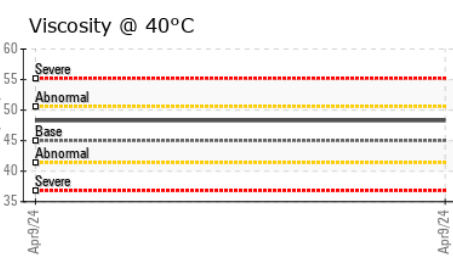
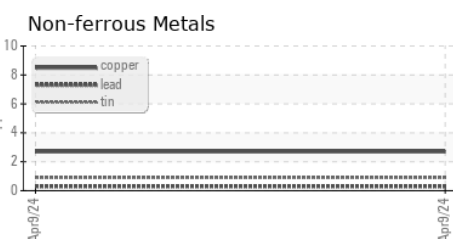
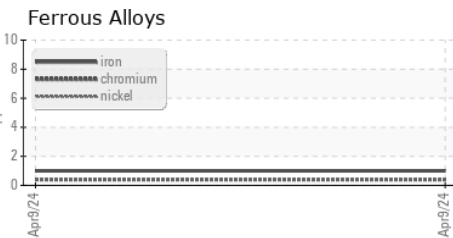
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      |
| Debris           | scalar | *Visual    | NONE    | LIGHT    | ---      |
| 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      | 48.3     | ---      |

| 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.** : KCPA016143  
**Lab Number** : 06156909  
**Unique Number** : 10992332  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )  
**Received** : 22 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 24 Apr 2024 - Angela Borella

**BP QUALITY PAINT AND BODY**  
 739 N BEN MADDOX WAY  
 VISALIA, CA  
 US 93292  
 Contact: J KAMINSKI  
 jkaminski@qponline.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)