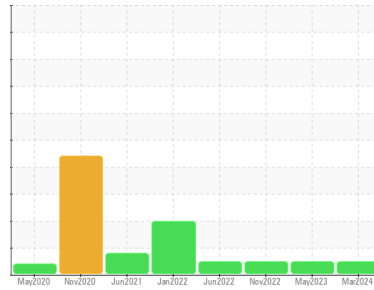




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**7145286 (S/N 1028)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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>KC122680</b>    | KC101270    | KC97348     |
| Sample Date        | Client Info     |        |            | <b>25 Mar 2024</b> | 17 May 2023 | 22 Nov 2022 |
| Machine Age        | hrs Client Info |        |            | <b>24659</b>       | 21667       | 3110        |
| Oil Age            | hrs Client Info |        |            | <b>0</b>           | 6048        | 3110        |
| Oil Changed        | Client Info     |        |            | <b>N/A</b>         | Changed     | Not Changed |
| Sample Status      |                 |        |            | <b>NORMAL</b>      | NORMAL      | NORMAL      |

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

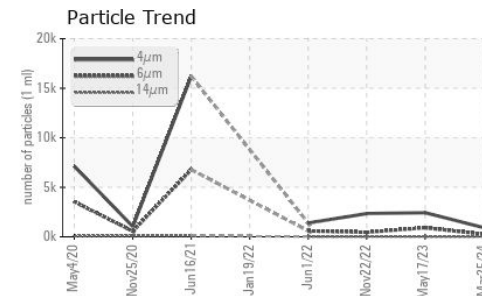
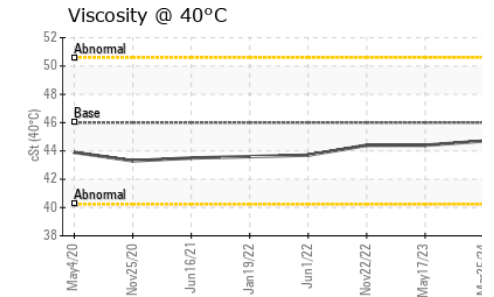
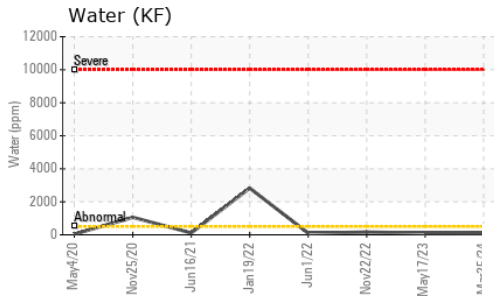
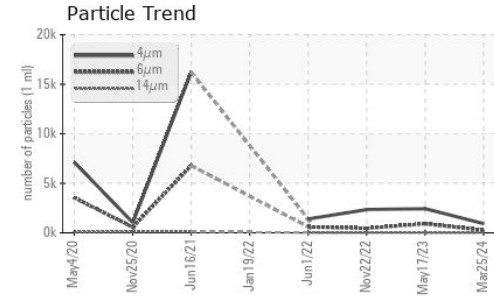
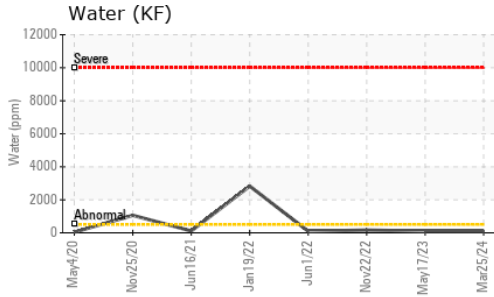
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m |            | <b>0</b>     | 0        | <1       |
| Barium     | ppm | ASTM D5185m | 90         | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | <1       |
| Manganese  | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | 0        |
| Magnesium  | ppm | ASTM D5185m | 90         | <b>3</b>     | 1        | 11       |
| Calcium    | ppm | ASTM D5185m | 2          | <b>3</b>     | 0        | 0        |
| Phosphorus | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 23       |
| Zinc       | ppm | ASTM D5185m |            | <b>81</b>    | 30       | 1        |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <b>&lt;1</b> | 0        | <1       |
| Sodium       | ppm | ASTM D5185m |            | <b>1</b>     | 0        | 10       |
| Potassium    | ppm | ASTM D5185m | >20        | <b>2</b>     | 2        | 31       |
| Water        | %   | ASTM D6304  | >0.05      | <b>0.009</b> | 0.010    | 0.016    |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>90</b>    | 103.5    | 165.6    |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   |            | <b>928</b>      | 2434     | 2345     |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>264</b>      | 916      | 449      |
| Particles >14µm   |  | ASTM D7647   | >80        | <b>9</b>        | 12       | 18       |
| Particles >21µm   |  | ASTM D7647   | >20        | <b>2</b>        | 1        | 3        |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>0</b>        | 0        | 0        |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >--/17/13  | <b>17/15/10</b> | 18/17/11 | 18/16/11 |

| FLUID DEGRADATION |          | method     | limit/base | current      | history1 | history2 |
|-------------------|----------|------------|------------|--------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.4        | <b>0.343</b> | 0.23     | 0.31     |

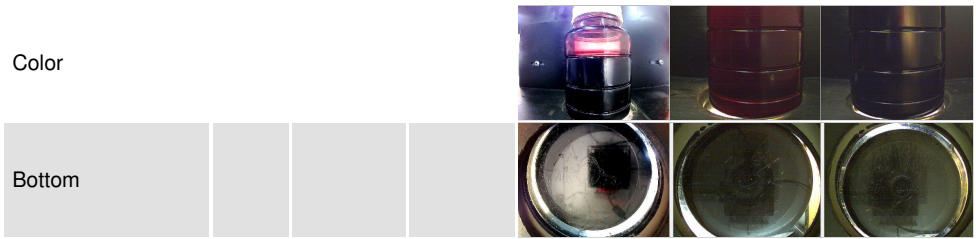
# OIL ANALYSIS REPORT



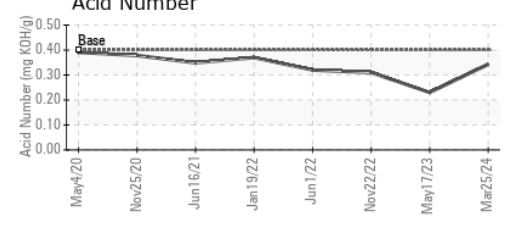
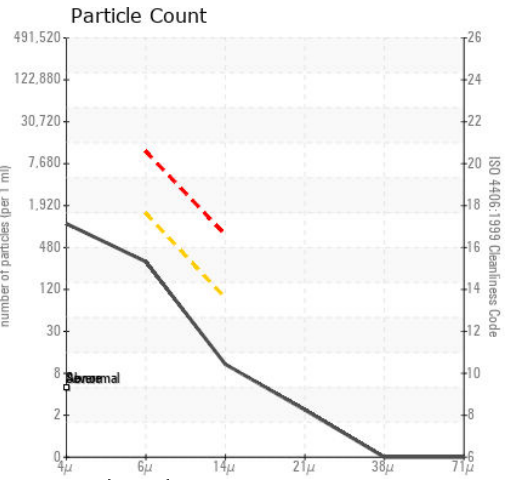
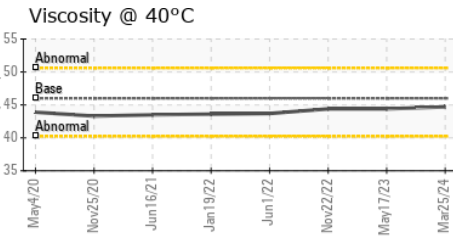
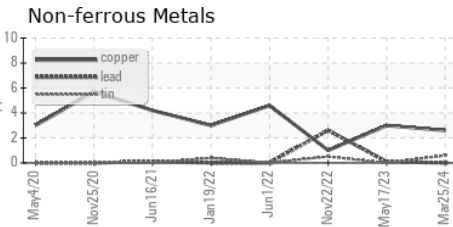
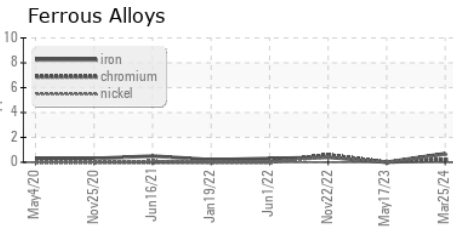
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | LIGHT    | 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      | 44.7     | 44.4     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC122680  
**Lab Number** : 06138060  
**Unique Number** : 10962868  
**Test Package** : IND 2  
**Received** : 03 Apr 2024  
**Tested** : 04 Apr 2024  
**Diagnosed** : 05 Apr 2024 - Don Baldrige

**INTERNATIONAL PRECISION MACHINING**  
 511 SUNDIAL DR  
 WAITE PARK, MN  
 US 56387  
 Contact: DAVE M.  
 davem@ipmnc.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)