KAESER COMPRESSORS
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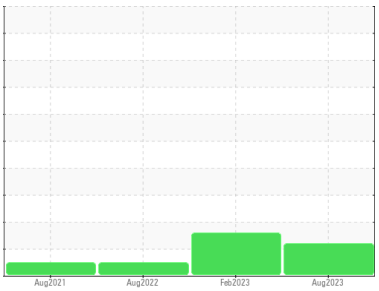
# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Machine Id
## 7402412 (S/N 1582)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

**▲ Recommendation**
No corrective action is recommended at this time. 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 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 | | **KC100280** | KC105997 | KC101543 |
| Sample Date | | Client Info | | **01 Aug 2023** | 13 Feb 2023 | 12 Aug 2022 |
| Machine Age | hrs | Client Info | | **7461** | 6091 | 4756 |
| Oil Age | hrs | Client Info | | **0** | 1335 | 0 |
| Oil Changed | | Client Info | | **N/A** | Not Changd | Changed |
| Sample Status | | | | **ATTENTION** | ABNORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **0** | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **1** | <1 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **7** | 5 | 8 |
| Tin | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | 90 | **0** | 15 | <1 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 90 | **5** | 46 | 10 |
| Calcium | ppm | ASTM D5185m | 2 | **0** | <1 | 0 |
| Phosphorus | ppm | ASTM D5185m | | **12** | 0 | 2 |
| Zinc | ppm | ASTM D5185m | | **0** | 6 | 11 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **<1** | 1 | <1 |
| Sodium | ppm | ASTM D5185m | | **3** | 16 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 6 | 0 |
| Water | % | ASTM D6304 | >0.05 | **0.005** | 0.013 | 0.011 |
| ppm Water | ppm | ASTM D6304 | >500 | **59** | 136.6 | 117.4 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **2338** | 3672 | 762 |
| Particles >6µm | | ASTM D7647 | >1300 | **991** | ▲ 1433 | 266 |
| Particles >14µm | | ASTM D7647 | >80 | ▲ **116** | ▲ 178 | 37 |
| Particles >21µm | | ASTM D7647 | >20 | ▲ **31** | ▲ 30 | 8 |
| Particles >38µm | | ASTM D7647 | >4 | **1** | 1 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ **18/17/14** | ▲ 19/18/15 | 17/15/12 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | **0.42** | 0.41 | 0.43 |

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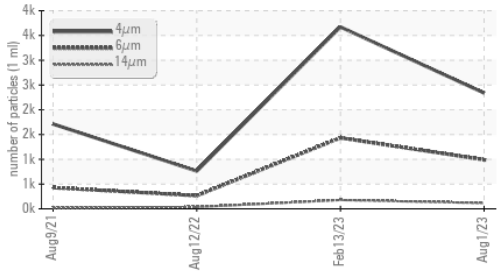
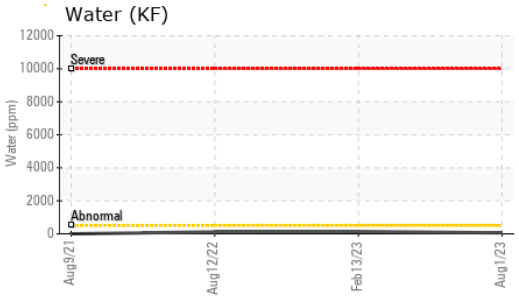
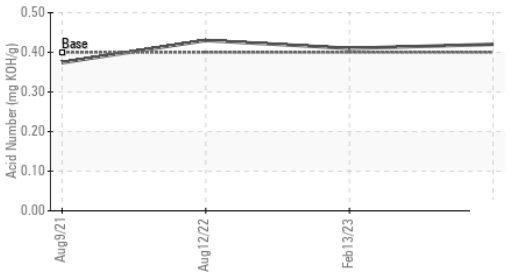
Particle Trend



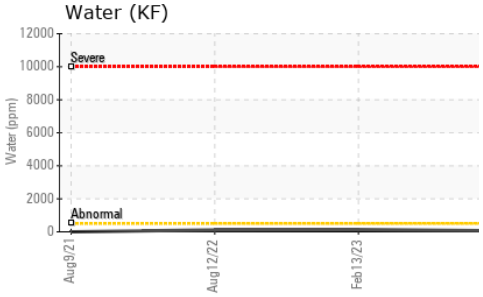

Water (KF)



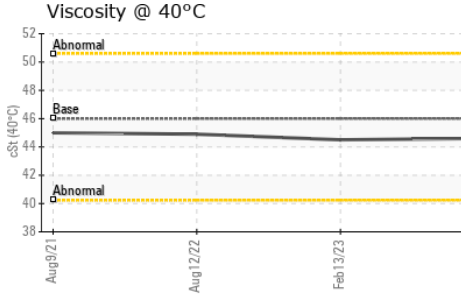

Acid Number




Water (KF)

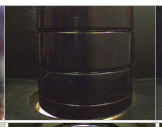
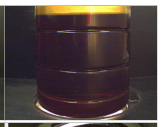
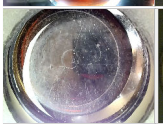
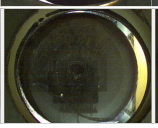



Viscosity @ 40°C



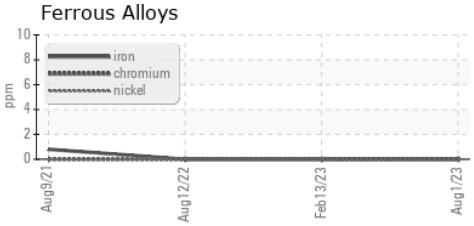

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **44.6** | 44.5 | 44.9 |

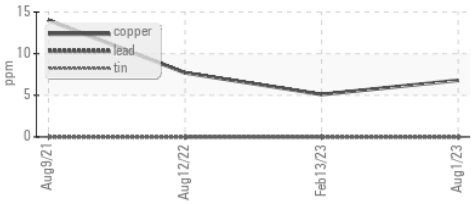
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  |  |
| Bottom | | |  |  |  |

## GRAPHS

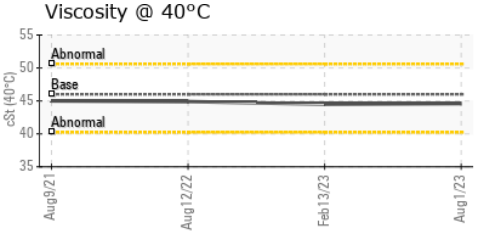
Ferrous Alloys



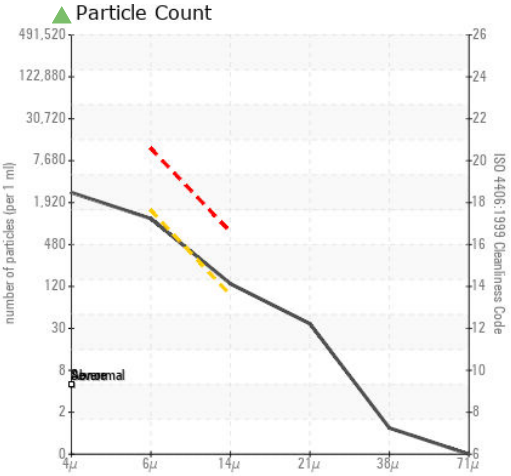

Non-ferrous Metals



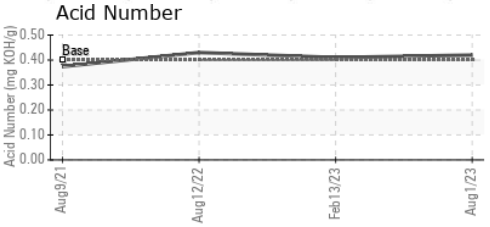

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KC100280
**Lab Number** : 06062010
**Unique Number** : 10833392
**Test Package** : IND 2
**Recieved** : 16 Jan 2024
**Diagnosed** : 18 Jan 2024
**Diagnostician** : Don Baldridge

*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)*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