KAESER COMPRESSORS
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# OIL ANALYSIS REPORT

Sample Rating Trend


**WATER**

Machine Id
## 1430656 (S/N 3111650)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) M-460 (--- QTS)**

## DIAGNOSIS

**Recommendation**

The filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

**Wear**

All component wear rates are normal.

**Contamination**

There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris 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 | | **KCPA006562** | --- | --- |
| Sample Date | | Client Info | | **09 Jan 2024** | --- | --- |
| Machine Age | hrs | Client Info | | **14103** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **3** | --- | --- |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185m | >3 | **0** | --- | --- |
| Titanium | ppm | ASTM D5185m | >3 | **0** | --- | --- |
| Silver | ppm | ASTM D5185m | >2 | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >10 | **2** | --- | --- |
| Lead | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Copper | ppm | ASTM D5185m | >50 | **9** | --- | --- |
| Tin | ppm | ASTM D5185m | >10 | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 0 | **0** | --- | --- |
| Barium | ppm | ASTM D5185m | 90 | **5** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 0 | **0** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185m | 100 | **11** | --- | --- |
| Calcium | ppm | ASTM D5185m | 0 | **2** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 0 | **47** | --- | --- |
| Zinc | ppm | ASTM D5185m | 0 | **0** | --- | --- |
| Sulfur | ppm | ASTM D5185m | 23500 | **22086** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **0** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **0** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **2** | --- | --- |
| Water | % | ASTM D6304 | >0.05 | ▲ **0.167** | --- | --- |
| ppm Water | ppm | ASTM D6304 | >500 | ▲ **1670** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | **0.43** | --- | --- |

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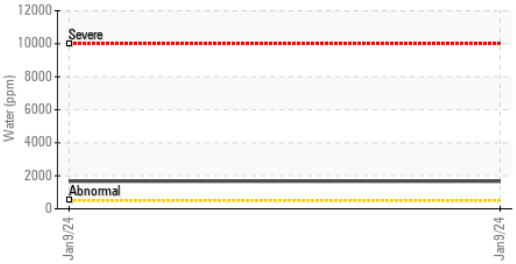
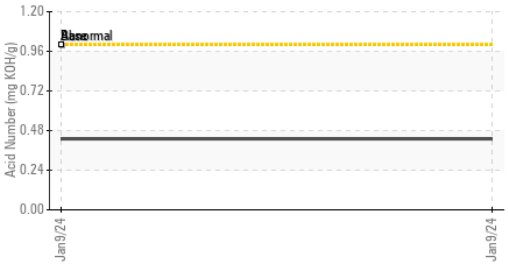
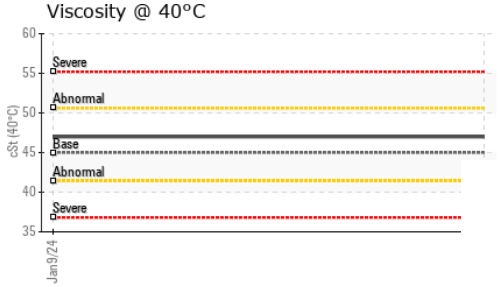
Water (KF)




Acid Number




Viscosity @ 40°C



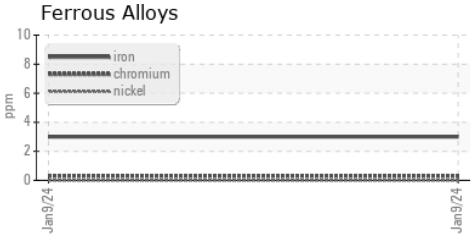

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Debris | scalar | *Visual | NONE | ▲ **MODER** | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | --- | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | --- | --- |
| Odor | scalar | *Visual | NORML | **NORML** | --- | --- |
| Emulsified Water | scalar | *Visual | >0.05 | **0.2%** | --- | --- |
| Free Water | scalar | *Visual | | **NEG** | --- | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 45 | **47.0** | --- | --- |

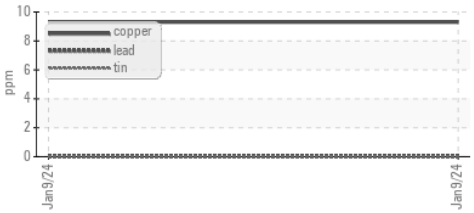
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

## GRAPHS

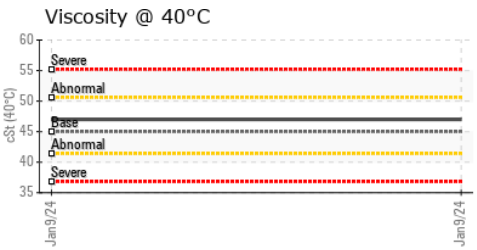
Ferrous Alloys



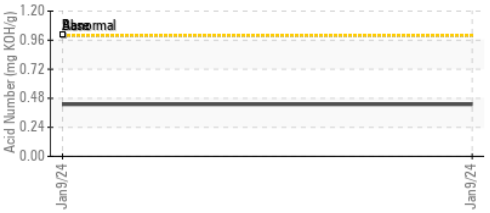

Non-ferrous Metals




Viscosity @ 40°C




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KCPA006562 **Recieved** : 17 Jan 2024
**Lab Number** : 06062707 **Diagnosed** : 19 Jan 2024
**Unique Number** : 10834089 **Diagnostician** : Jonathan Hester
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

*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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