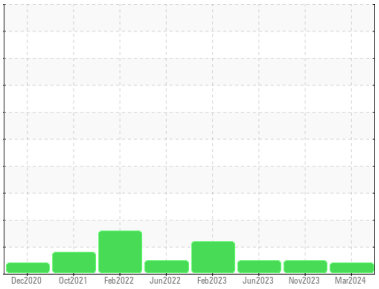
KAESER COMPRESSORS
Built for a lifetime.

# OIL ANALYSIS REPORT

Sample Rating Trend




**VIS DEBRIS**

Machine Id
## KAESER 7171453
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

**Recommendation**
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

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

**Contamination**
High 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 | | **KCPA016189** | KCPA007074 | KCPA003323 |
| Sample Date | | Client Info | | **18 Mar 2024** | 20 Nov 2023 | 20 Jun 2023 |
| Machine Age | hrs | Client Info | | **22203** | 19597 | 16431 |
| Oil Age | hrs | Client Info | | **2300** | 0 | 0 |
| Oil Changed | | Client Info | | **Changed** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **0** | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | **0** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **<1** | 0 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **1** | 6 | 4 |
| Tin | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 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 | **48** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 90 | **56** | <1 | 13 |
| Calcium | ppm | ASTM D5185m | 2 | **2** | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | | **0** | 0 | 1 |
| Zinc | ppm | ASTM D5185m | | **0** | 12 | 0 |
| Sulfur | ppm | ASTM D5185m | | **20184** | 18673 | 23103 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **<1** | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | **21** | 6 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | **5** | 1 | 2 |
| Water | % | ASTM D6304 | >0.05 | **0.019** | 0.007 | 0.011 |
| ppm Water | ppm | ASTM D6304 | >500 | **190** | 79 | 116.4 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **---** | 3453 | 1315 |
| Particles >6µm | | ASTM D7647 | >1300 | **---** | 827 | 404 |
| Particles >14µm | | ASTM D7647 | >80 | **---** | 46 | 32 |
| Particles >21µm | | ASTM D7647 | >20 | **---** | 12 | 9 |
| Particles >38µm | | ASTM D7647 | >4 | **---** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **---** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | **---** | 19/17/13 | 18/16/12 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | **0.37** | 0.32 | 0.35 |

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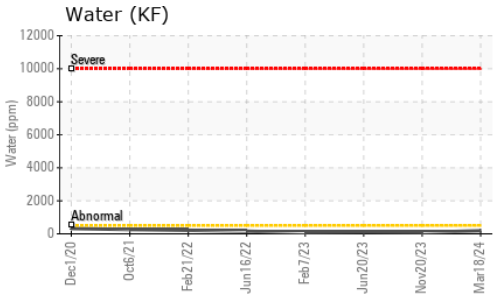
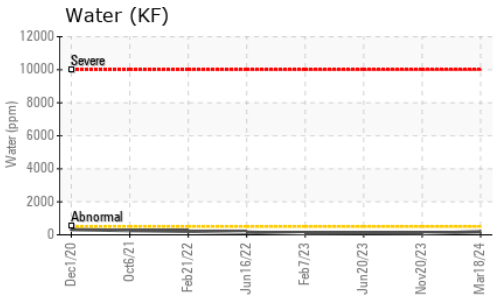
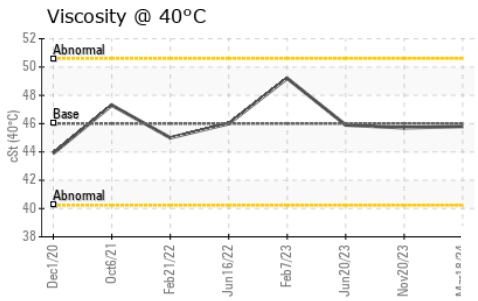


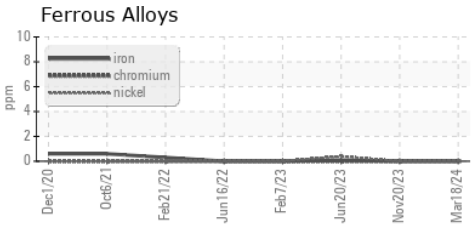



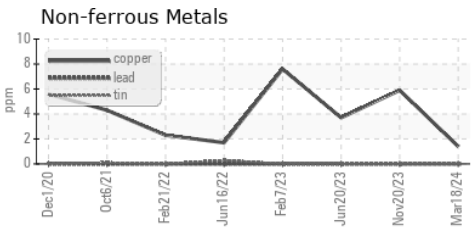

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

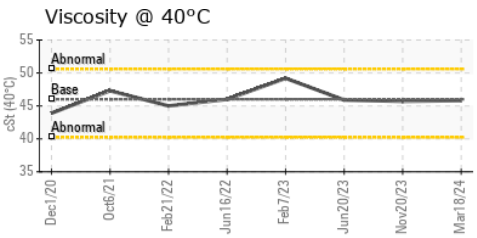
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **45.8** | 45.7 | 45.9 |

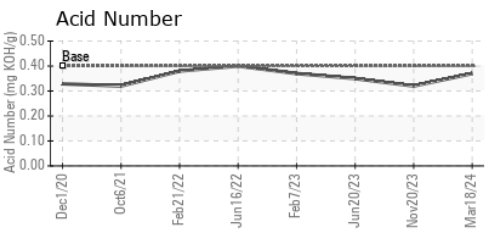
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KCPA016189 **Received** : 21 Mar 2024
**Lab Number** : 06125699 **Tested** : 25 Mar 2024
**Unique Number** : 10939850 **Diagnosed** : 25 Mar 2024 - Don Baldridge
**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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