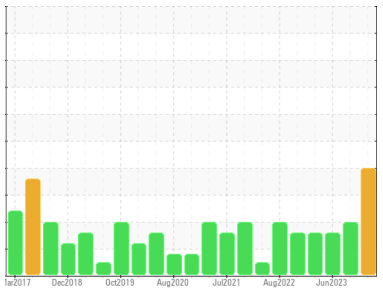
KAESER COMPRESSORS
Built for a lifetime.

# OIL ANALYSIS REPORT

Sample Rating Trend




**WATER**

Machine Id
## KAESER ASD 40T 5493667 (S/N 1148)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- LTR)**

## DIAGNOSIS

**Recommendation**
The filter change at the time of sampling has been noted. 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**
Appearance is hazy. There is a moderate amount of particulates present in the oil. There is a light concentration of water 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 | | **KC06216881** | KC05994386 | KC05883344 |
| Sample Date | | Client Info | | **03 Jun 2024** | 12 Oct 2023 | 05 Jun 2023 |
| Machine Age | hrs | Client Info | | **37657** | 33305 | 30903 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **<1** | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | **<1** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >3 | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **<1** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **3** | <1 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **<1** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **9** | 8 | 14 |
| Tin | ppm | ASTM D5185m | >10 | **<1** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **<1** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | 90 | **1** | 20 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 90 | **<1** | 4 | 8 |
| Calcium | ppm | ASTM D5185m | 2 | **0** | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | **2** | 36 | 0 |
| Zinc | ppm | ASTM D5185m | | **2** | 25 | 34 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **<1** | 0 | 0 |
| Sodium | ppm | ASTM D5185m | | **0** | 6 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 0 | 2 |
| Water | % | ASTM D6304 | >0.05 | ▲ **0.068** | 0.008 | 0.042 |
| ppm Water | ppm | ASTM D6304 | >500 | ▲ **680** | 89.6 | 423.3 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **1096** | 11898 | 5996 |
| Particles >6µm | | ASTM D7647 | >1300 | **597** | ▲ 4001 | ▲ 1760 |
| Particles >14µm | | ASTM D7647 | >80 | ● **102** | ▲ 482 | ▲ 226 |
| Particles >21µm | | ASTM D7647 | >20 | ● **34** | ▲ 174 | ▲ 77 |
| Particles >38µm | | ASTM D7647 | >4 | ● **5** | ▲ 13 | 3 |
| Particles >71µm | | ASTM D7647 | >3 | **1** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ● **17/16/14** | ▲ 21/19/16 | ▲ 20/18/15 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | **0.39** | 0.36 | 0.36 |

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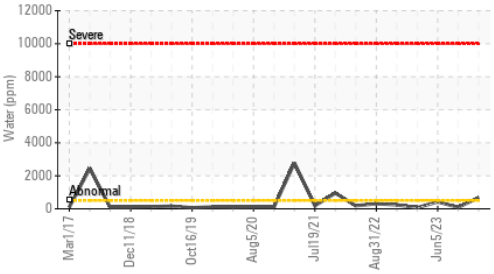
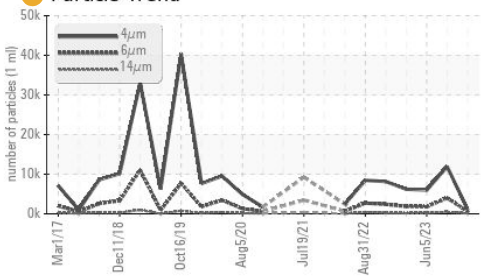
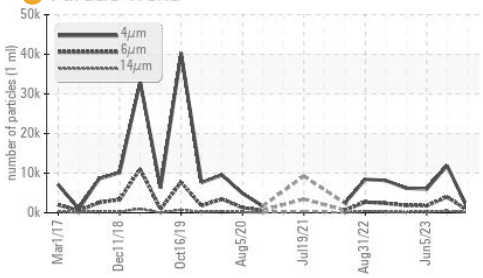
Water (KF)



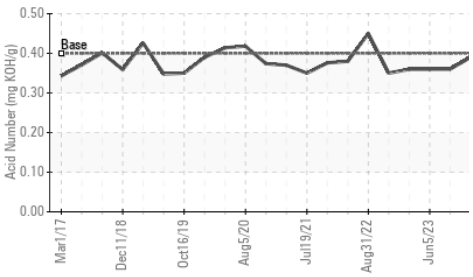

Particle Trend



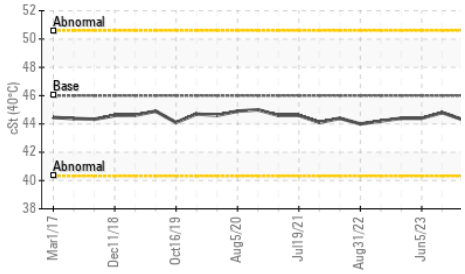

Particle Trend




Acid Number




Viscosity @ 40°C



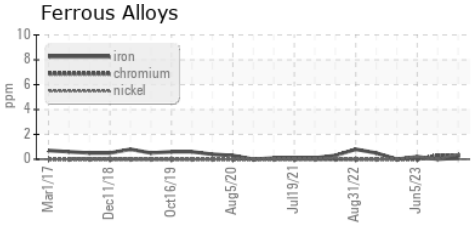

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | **HAZY** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | **0.2%** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **44.3** | 44.8 | 44.4 |

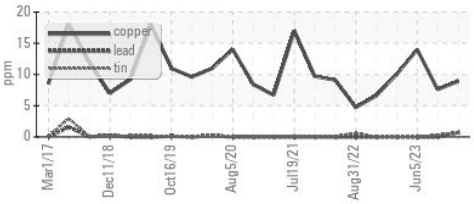
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

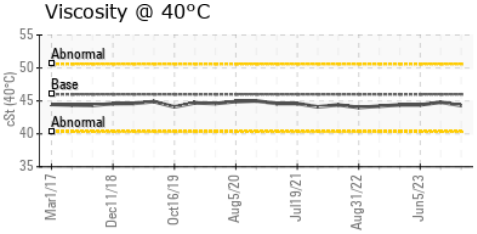
Ferrous Alloys



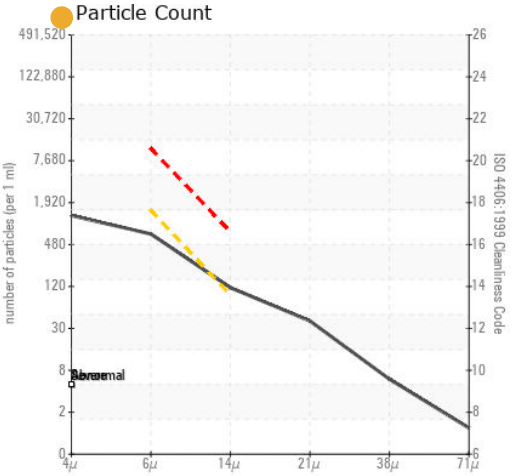

Non-ferrous Metals



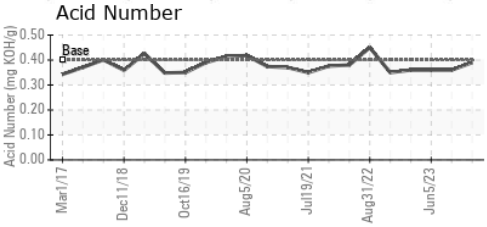

Viscosity @ 40°C




Particle Count




Acid Number




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KC06216881
**Lab Number** : 06216881
**Unique Number** : 11089745
**Test Package** : IND 2

**Received** : 21 Jun 2024
**Tested** : 26 Jun 2024
**Diagnosed** : 26 Jun 2024 - Jonathan Hester

Certificate L2367

**FIELDALE**
270 FDC BY PRODUCT DR HWY 145
EASTANOLLEE, GA
US 30538
Contact:
T:
F:

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
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*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*