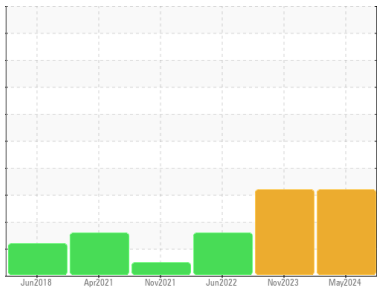
KAESER COMPRESSORS
Built for a lifetime.

# OIL ANALYSIS REPORT

Sample Rating Trend




**WATER**

Machine Id
## KAESER SK 20T 3478694 (S/N 1268)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## 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**
There is a high 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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **KCPA018272** | KCPA011211 | KCP40394 |
| Sample Date | | Client Info | | **24 May 2024** | 27 Nov 2023 | 20 Jun 2022 |
| Machine Age | hrs | Client Info | | **15276** | 14529 | 12046 |
| Oil Age | hrs | Client Info | | **0** | 0 | 700 |
| Oil Changed | | Client Info | | **Not Changd** | N/A | Changed |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ATTENTION |

| 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** | <1 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **<1** | <1 | 2 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >50 | **4** | 3 | 4 |
| Tin | ppm | ASTM D5185m | >10 | **0** | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Barium | ppm | ASTM D5185m | 90 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 90 | **39** | 46 | 54 |
| Calcium | ppm | ASTM D5185m | 2 | **0** | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | **8** | 1 | 5 |
| Zinc | ppm | ASTM D5185m | | **1** | 0 | 8 |
| Sulfur | ppm | ASTM D5185m | | **20089** | 18967 | 17632 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **<1** | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | **10** | 6 | 10 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 3 | 3 |
| Water | % | ASTM D6304 | >0.05 | ▲ **0.058** | ▲ 0.306 | 0.035 |
| ppm Water | ppm | ASTM D6304 | >500 | ▲ **589** | ▲ 3060 | 359.6 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **25926** | 939 | 8818 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **5013** | 512 | ● 2155 |
| Particles >14µm | | ASTM D7647 | >80 | ▲ **133** | ● 87 | ● 102 |
| Particles >21µm | | ASTM D7647 | >20 | ▲ **23** | ● 29 | ● 24 |
| Particles >38µm | | ASTM D7647 | >4 | **1** | ● 5 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ **22/20/14** | ● 17/16/14 | ● 20/18/14 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | **0.31** | 0.32 | 0.38 |

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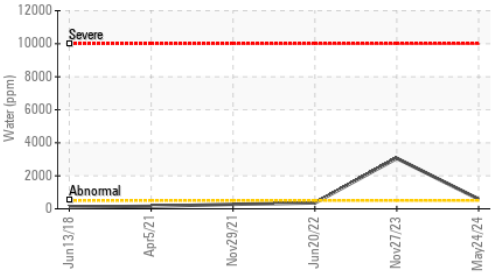
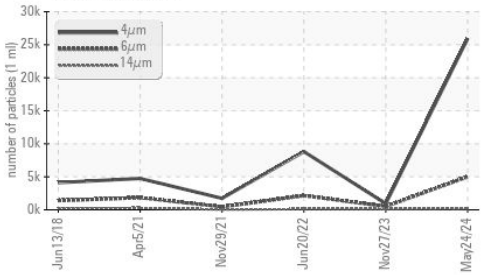
# OIL ANALYSIS REPORT

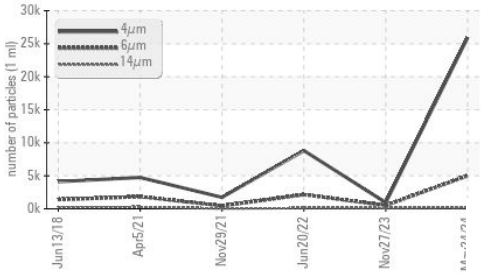
Water (KF)



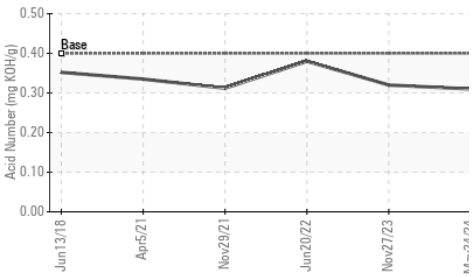

Particle Trend



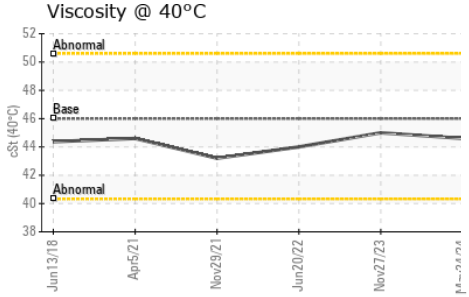

Particle Trend




Acid Number

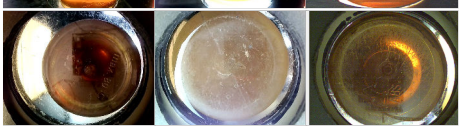



Viscosity @ 40°C



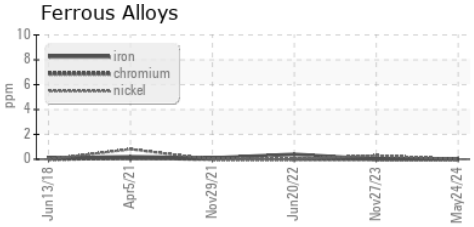

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | **NEG** | ▲ 0.2% | 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** | 45.0 | 44.0 |

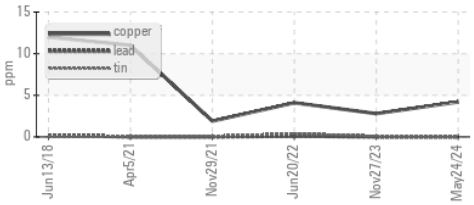
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

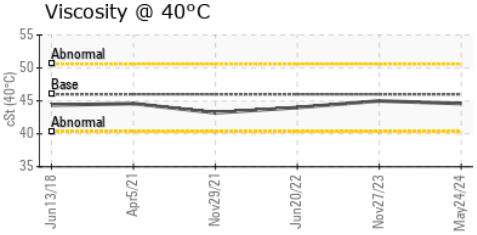
Ferrous Alloys



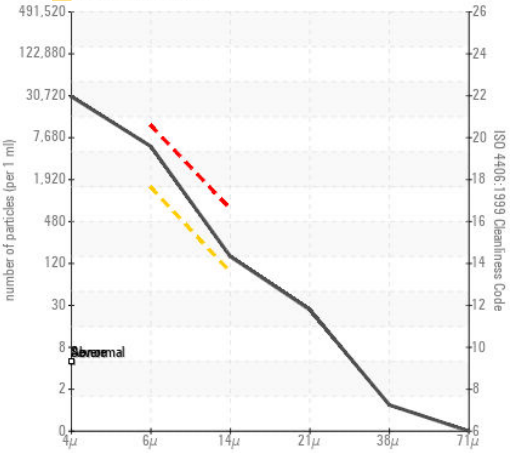

Non-ferrous Metals



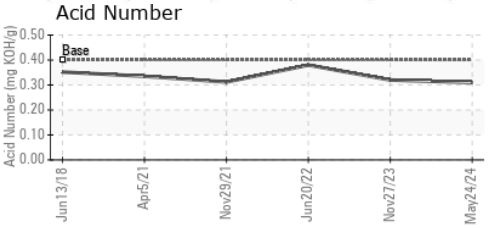

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KCPA018272
**Lab Number** : 06205446
**Unique Number** : 11072907
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**Received** : 10 Jun 2024
**Tested** : 12 Jun 2024
**Diagnosed** : 13 Jun 2024 - 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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