



Built for a lifetime™

OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
KAESER SM 11 1610110 (S/N 1054)

Component
Compressor

Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | KCPA005223 | KCP51110 | KCP38730 |
| Sample Date | | Client Info | | 01 Sep 2023 | 27 Jul 2022 | 22 Oct 2021 |
| Machine Age | hrs | Client Info | | 0 | 46883 | 44819 |
| Oil Age | hrs | Client Info | | 0 | 2064 | 9045 |
| Filter Age | hrs | Client Info | | 0 | 2064 | 9045 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 0 | 0 | 0 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >50 | 6 | 6 | 25 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

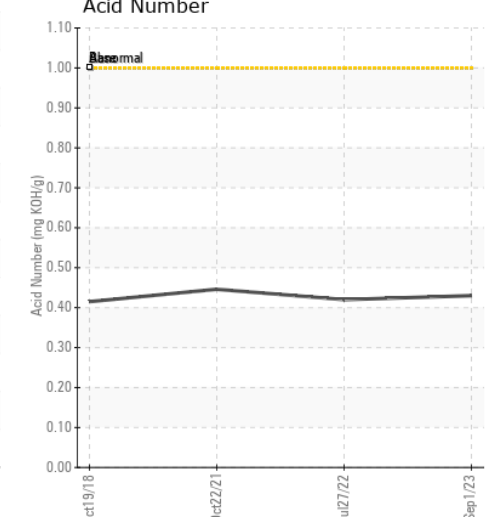
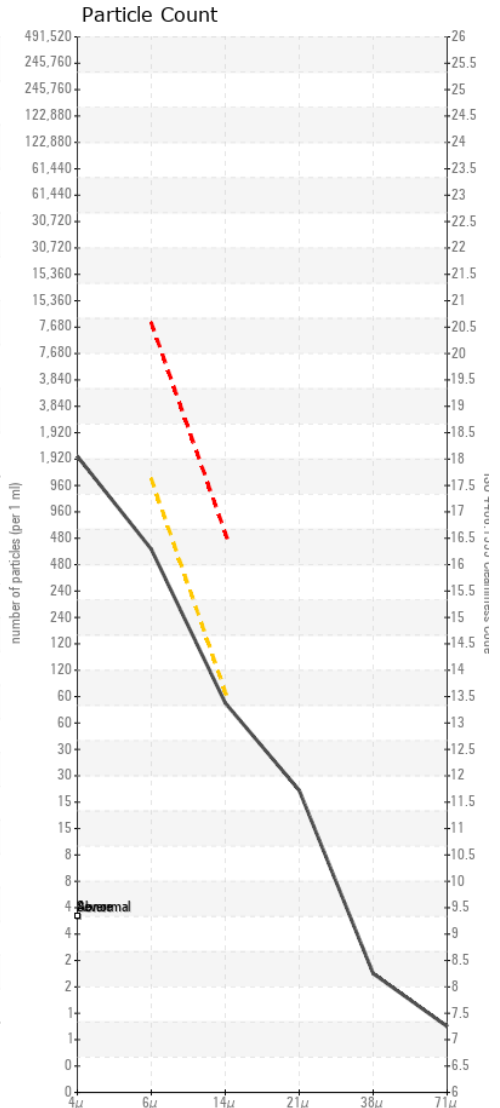
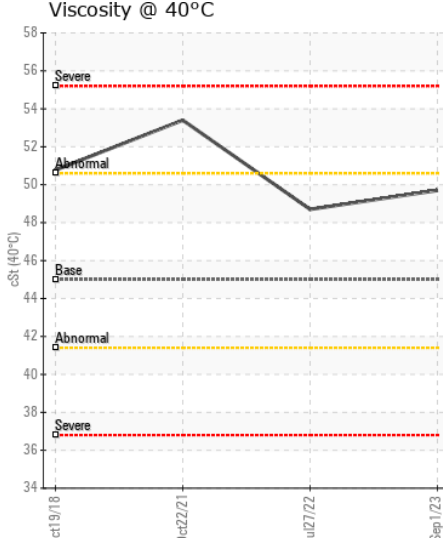
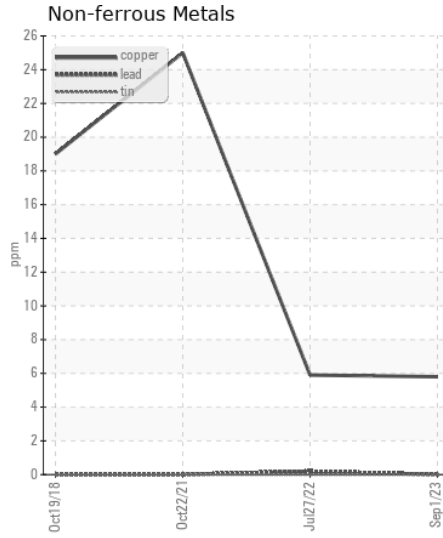
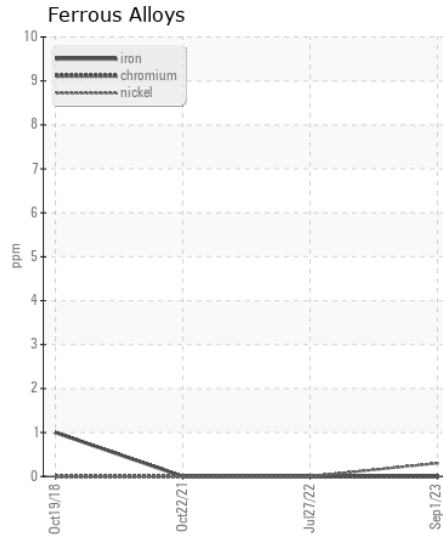
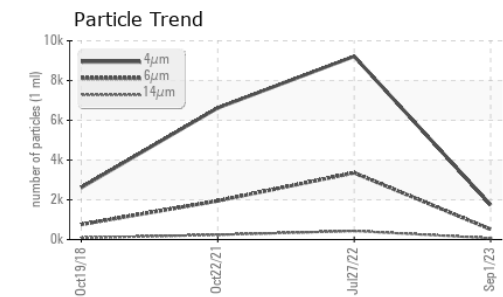
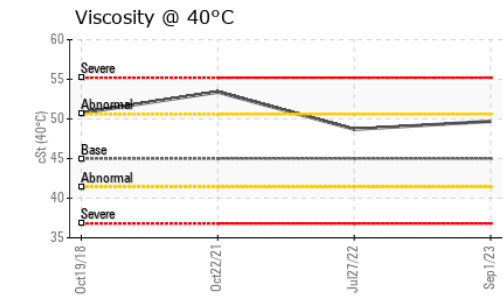
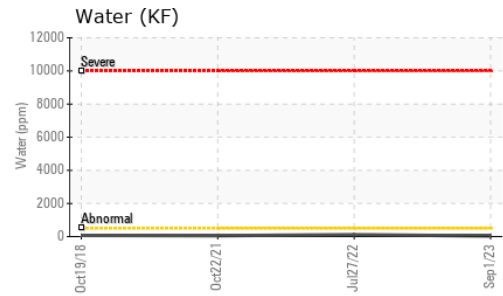
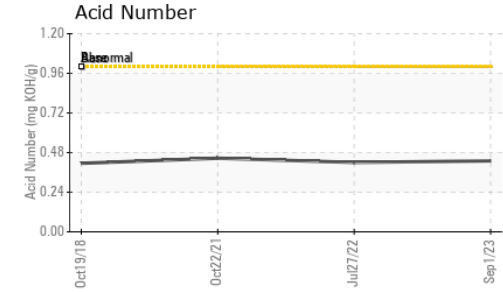
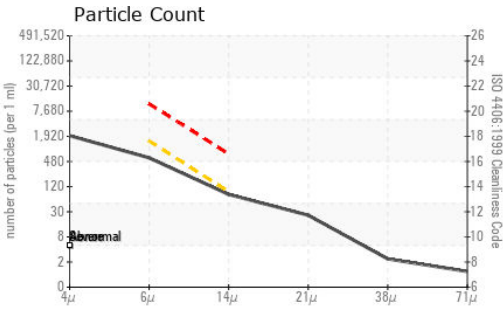
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

| | | | | | | |
|------------------|--------|--------------|----------|----------|------------|---------|
| Silicon | ppm | ASTM D5185m | >25 | <1 | 0 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 1 | 0 |
| Water | % | ASTM D6304 | >0.05 | 0.003 | 0.011 | 0.005 |
| ppm Water | ppm | ASTM D6304 | >500 | 32.5 | 118.5 | 52.2 |
| Particles >4µm | | ASTM D7647 | | 1743 | 9217 | 6622 |
| Particles >6µm | | ASTM D7647 | >1300 | 516 | ▲ 3359 | ▲ 1945 |
| Particles >14µm | | ASTM D7647 | >80 | 69 | ▲ 433 | ▲ 239 |
| Particles >21µm | | ASTM D7647 | >20 | 22 | ▲ 82 | ▲ 80 |
| Particles >38µm | | ASTM D7647 | >4 | 2 | 3 | 2 |
| Particles >71µm | | ASTM D7647 | >3 | 1 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | :-/17/13 | 18/16/13 | ▲ 20/19/16 | ▲ 18/15 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | 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 |

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|-------|-------|-------|-------|
| Sodium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 | 1 |
| Barium | ppm | ASTM D5185m | 90 | 0 | 0 | 2 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 100 | 2 | 27 | 4 |
| Calcium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | 0 | 2 | 0 | 4 |
| Zinc | ppm | ASTM D5185m | 0 | 5 | 4 | 0 |
| Sulfur | ppm | ASTM D5185m | 23500 | 20813 | 18227 | 18901 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | 0.43 | 0.42 | 0.446 |
| Visc @ 40°C | cSt | ASTM D445 | 45 | 49.7 | 48.7 | 53.4 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA005223 **Received** : 21 Sep 2023
Lab Number : 05957682 **Tested** : 22 Sep 2023
Unique Number : 10658895 **Diagnosed** : 22 Sep 2023 - Doug Bogart
Test Package : IND 2 (Additional Tests: KF, PrtCount)

G & K MACHINE CO
 4833 NEWPORT ST
 COMMERCE CITY, CO
 US 80022
 Contact: Service Manager

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)

T:
F: