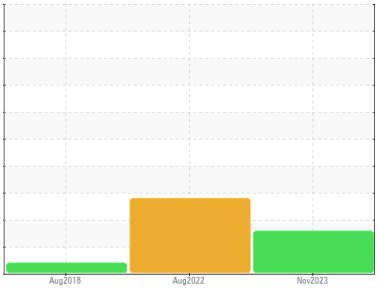
# PROBLEM SUMMARY

Sample Rating Trend

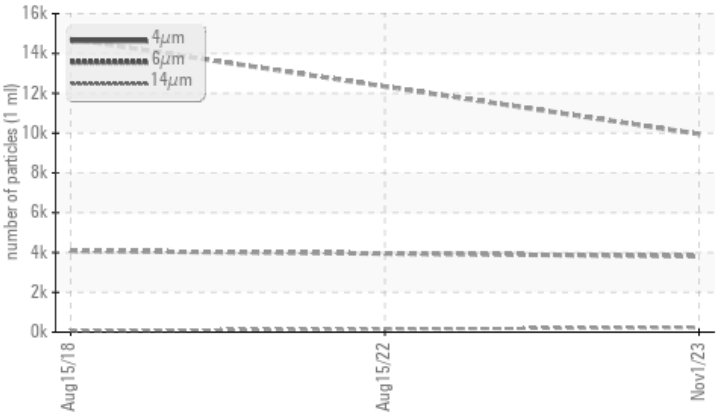



ISO

Machine Id
## KAESER SM 10 5523596 (S/N 1049)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) M-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend




## RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |
|---|---|---|---|---|---|---|
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **3813** | --- | ▲ 4082 |
| Particles >14µm | | ASTM D7647 | >80 | ▲ **234** | --- | 77 |
| Particles >21µm | | ASTM D7647 | >20 | ▲ **55** | --- | 20 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ **20/19/15** | --- | ▲ 19/13 |

**Customer Id:** DOLJAN
**Sample No.:** KCPA009763
**Lab Number:** 05999884
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Don Baldridge +1
don.b505@comcast.net

*To change component or sample information:*
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

**15 Aug 2022 Diag: Don Baldridge**

**WATER**

Oil and 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 recommend an early resample in 500 hours to monitor this condition.All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid.

**view report**

**15 Aug 2018 Diag: Angela Borella**

**ISO**

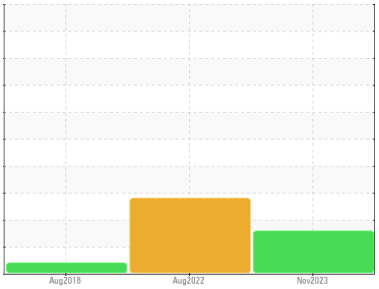
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

**view report**

KAESER COMPRESSORS
Built for a lifetime.

# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Machine Id
## KAESER SM 10 5523596 (S/N 1049)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) M-460 (--- GAL)**

## DIAGNOSIS

**Recommendation**
No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

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

**Contamination**
There is a high amount of particulates 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 | | **KCPA009763** | KCP49674 | KCP06781 |
| Sample Date | | Client Info | | **01 Nov 2023** | 15 Aug 2022 | 15 Aug 2018 |
| Machine Age | hrs | Client Info | | **20146** | 20133 | 7677 |
| Oil Age | hrs | Client Info | | **0** | 3000 | 7677 |
| Oil Changed | | Client Info | | **N/A** | Changed | Changed |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **0** | 3 | 3 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >10 | **0** | 0 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >50 | **2** | 16 | 4 |
| Tin | ppm | ASTM D5185m | >10 | **0** | <1 | <1 |
| Antimony | ppm | ASTM D5185m | | **---** | --- | 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** | 1 | <1 |
| Barium | ppm | ASTM D5185m | 90 | **70** | 0 | 15 |
| Molybdenum | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 100 | **79** | 8 | 55 |
| Calcium | ppm | ASTM D5185m | 0 | **<1** | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | 0 | **<1** | 2 | 1 |
| Zinc | ppm | ASTM D5185m | 0 | **0** | 25 | 7 |
| Sulfur | ppm | ASTM D5185m | 23500 | **18123** | 18227 | 22070 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **0** | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | **5** | 5 | 13 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | 2 |
| Water | % | ASTM D6304 | >0.05 | **0.015** | ▲ 0.239 | 0.024 |
| ppm Water | ppm | ASTM D6304 | >500 | **150.4** | ▲ 2390 | 240 |

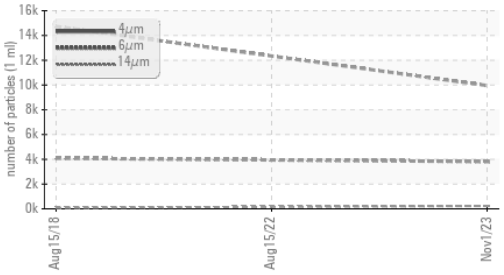
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **9952** | --- | 14729 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **3813** | --- | ▲ 4082 |
| Particles >14µm | | ASTM D7647 | >80 | ▲ **234** | --- | 77 |
| Particles >21µm | | ASTM D7647 | >20 | ▲ **55** | --- | 20 |
| Particles >38µm | | ASTM D7647 | >4 | **2** | --- | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ **20/19/15** | --- | ▲ 19/13 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | **0.35** | 0.33 | 0.351 |

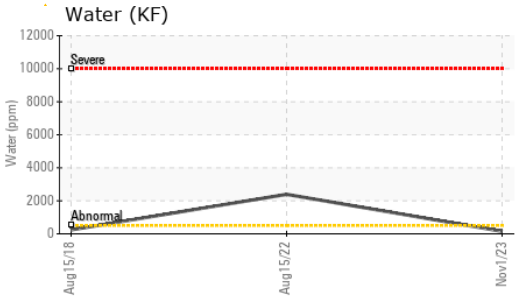
KAESER COMPRESSORS
Built for a lifetime.

# OIL ANALYSIS REPORT

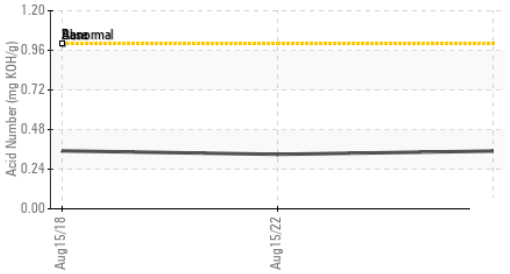
Particle Trend



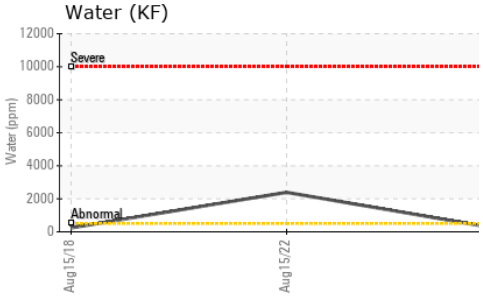

Water (KF)



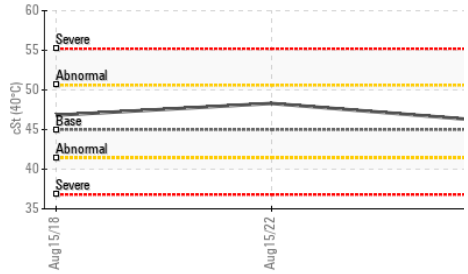

Acid Number




Water (KF)




Viscosity @ 40°C



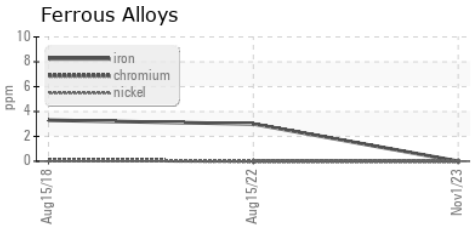

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | VLITE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | ▲ MODER | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | ▲ HAZY | 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 | 45 | **46.1** | 48.3 | 46.81 |

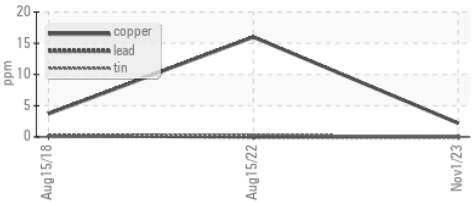
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

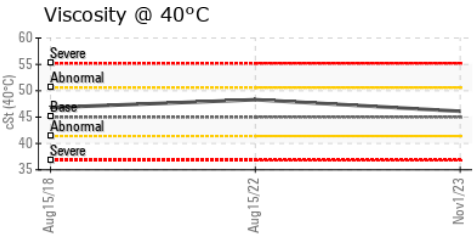
Ferrous Alloys



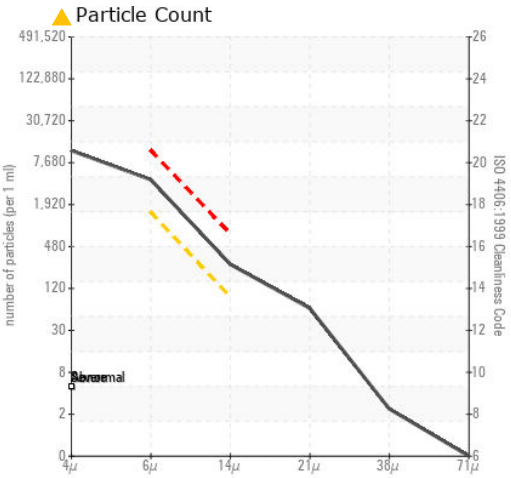

Non-ferrous Metals



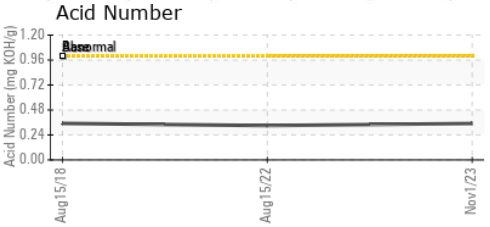

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KCPA009763 **Received** : 06 Nov 2023
**Lab Number** : 05999884 **Diagnosed** : 08 Nov 2023
**Unique Number** : 10728244 **Diagnostician** : 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)*

**DOLLAR GENERAL**
101 INNOVATION DR
JANESVILLE, WI
US 53546
Contact: Service Manager
T:
F: