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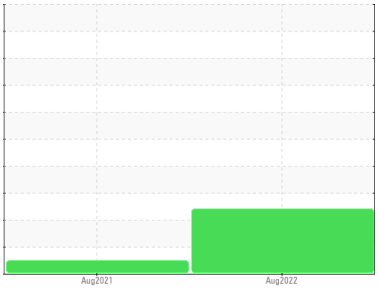
# PROBLEM SUMMARY

**Sample Rating Trend**

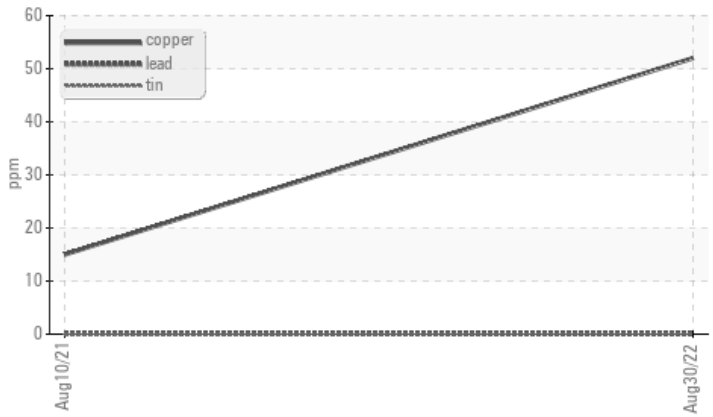



**WEAR**

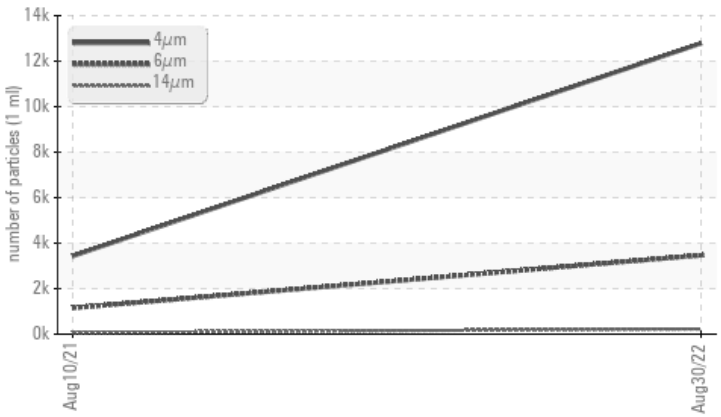
Machine Id
## KAESER 7175557
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals




▲ Particle Trend




## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | ABNORMAL | NORMAL | --- |
|---|---|---|---|---|---|---|
| Copper | ppm | ASTM D5185m | >50 | ▲ **52** | 15 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **3465** | 1150 | --- |
| Particles >14µm | | ASTM D7647 | >80 | ▲ **226** | 69 | --- |
| Particles >21µm | | ASTM D7647 | >20 | ▲ **42** | 21 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ **21/19/15** | 17/13 | --- |

**Customer Id:** UNIKAN
**Sample No.:** KCP38242
**Lab Number:** 05645531
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Change Fluid | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |
| Change Filter | --- | --- | ? | Oil and filter change at the time of sampling has been noted. |

## HISTORICAL DIAGNOSIS

**10 Aug 2021 Diag: Don Baldridge**

**NORMAL**

Resample at the next service interval to monitor.All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

**view report**

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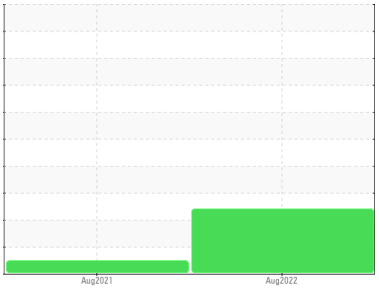
# OIL ANALYSIS REPORT

Sample Rating Trend




**WEAR**

Machine Id
## KAESER 7175557
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

**Wear**
The copper level is abnormal. All other 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 | history 1 | history 2 |
|---|---|---|---|---|---|
| Sample Number | | | **KCP38242** | KCP41549 | --- |
| Sample Date | | | **30 Aug 2022** | 10 Aug 2021 | --- |
| Machine Age | hrs | | **8852** | 5362 | --- |
| Oil Age | hrs | | **3000** | 4000 | --- |
| Oil Changed | | | **Changed** | Changed | --- |
| Sample Status | | | **ABNORMAL** | NORMAL | --- |

| WEAR METALS | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **0** | <1 | --- |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | --- |
| Nickel | ppm | ASTM D5185m | >3 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185m | >3 | **0** | 0 | --- |
| Silver | ppm | ASTM D5185m | >2 | **<1** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >10 | **<1** | 0 | --- |
| Lead | ppm | ASTM D5185m | >10 | **0** | <1 | --- |
| Copper | ppm | ASTM D5185m | >50 | ▲ **52** | 15 | --- |
| Tin | ppm | ASTM D5185m | >10 | **0** | 0 | --- |
| Antimony | ppm | ASTM D5185m | | **---** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | <1 | --- |
| Barium | ppm | ASTM D5185m | 90 | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **0** | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 90 | **0** | <1 | --- |
| Calcium | ppm | ASTM D5185m | 2 | **0** | 0 | --- |
| Phosphorus | ppm | ASTM D5185m | | **6** | 7 | --- |
| Zinc | ppm | ASTM D5185m | | **5** | 0 | --- |
| Sulfur | ppm | ASTM D5185m | | **13020** | 10244 | --- |

| CONTAMINANTS | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **<1** | <1 | --- |
| Sodium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Water | % | ASTM D6304 | >0.05 | **0.014** | 0.003 | --- |
| ppm Water | ppm | ASTM D6304 | >500 | **148.5** | 38.1 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **12784** | 3433 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **3465** | 1150 | --- |
| Particles >14µm | | ASTM D7647 | >80 | ▲ **226** | 69 | --- |
| Particles >21µm | | ASTM D7647 | >20 | ▲ **42** | 21 | --- |
| Particles >38µm | | ASTM D7647 | >4 | **1** | 1 | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ **21/19/15** | 17/13 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | **0.44** | 0.270 | --- |

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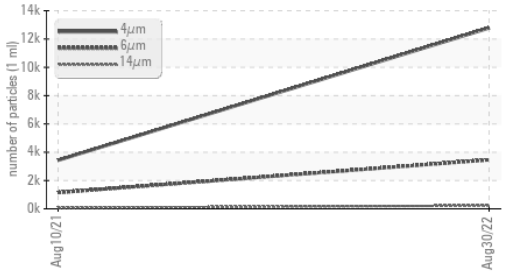
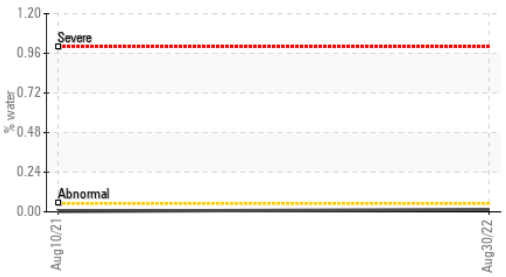
# OIL ANALYSIS REPORT

Particle Trend

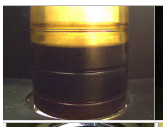
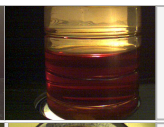
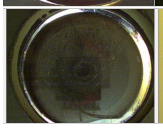
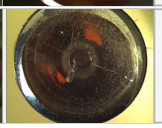



Water




| VISUAL | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Debris | scalar | *Visual | NONE | **LIGHT** | LIGHT | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.05 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

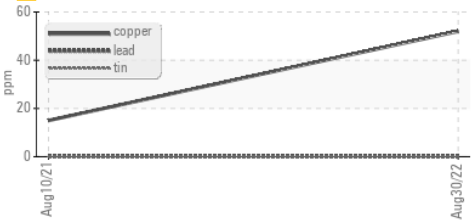
| FLUID PROPERTIES | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **51.4** | 44.3 | --- |

| SAMPLE IMAGES | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

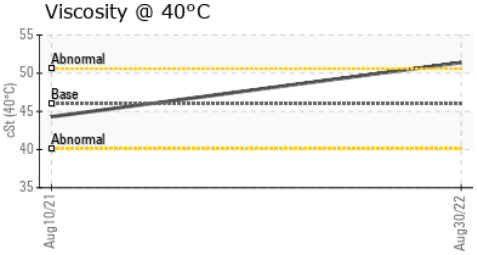
## GRAPHS

Ferrous Alloys

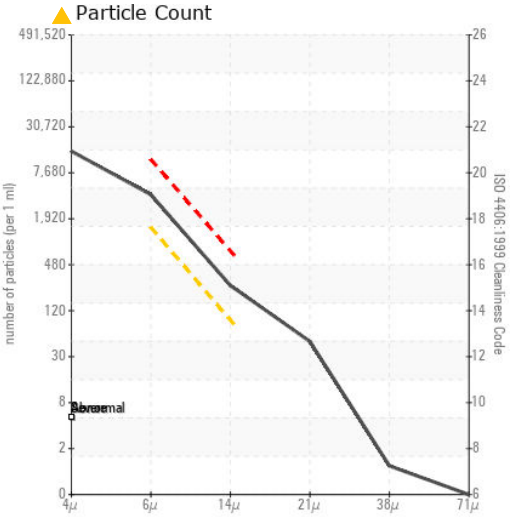

Non-ferrous Metals



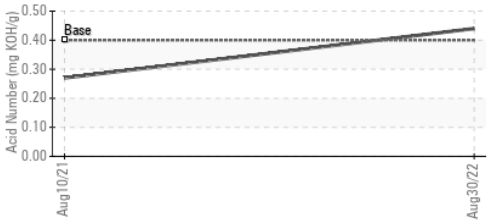

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KCP38242 **Received** : 19 Sep 2022
**Lab Number** : 05645531 **Diagnosed** : 21 Sep 2022
**Unique Number** : 10140070 **Diagnostician** : Jonathan Hester
**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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