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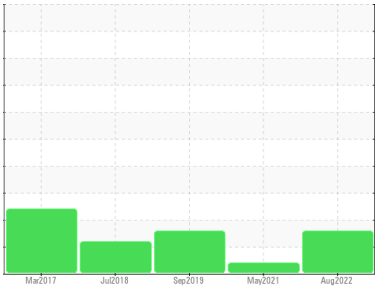
# PROBLEM SUMMARY

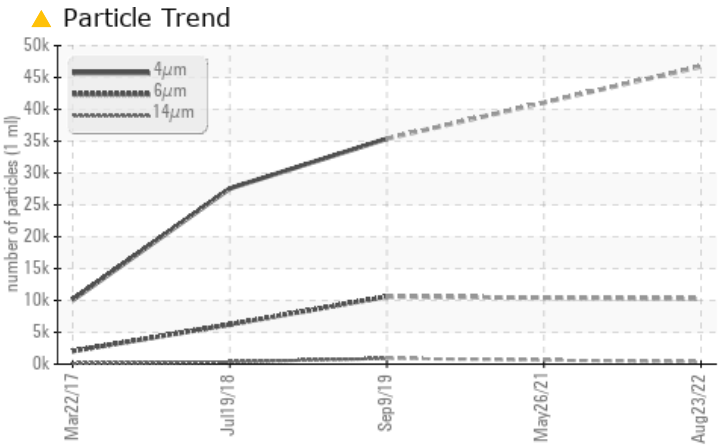
**Sample Rating Trend**




**ISO**

Machine Id
## KAESER CS 91 1627931 (S/N 1022)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend you service the filters on this component. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |
|---|---|---|---|---|---|---|
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **10232** | --- | ▲ 10595 |
| Particles >14µm | | ASTM D7647 | >80 | ▲ **357** | --- | ▲ 907 |
| Particles >21µm | | ASTM D7647 | >20 | ▲ **70** | --- | ▲ 227 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ **23/21/16** | --- | ▲ 21/17 |

**Customer Id:** CREPHI
**Sample No.:** KCP49488
**Lab Number:** 05635029
**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

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Change Filter | --- | --- | ? | We recommend you service the filters on this component. |

## HISTORICAL DIAGNOSIS

**26 May 2021 Diag: Angela Borella**

VIS DEBRIS

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Moderate concentration of visible dirt/debris present 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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**09 Sep 2019 Diag: Don Baldridge**

ISO

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.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

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**19 Jul 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

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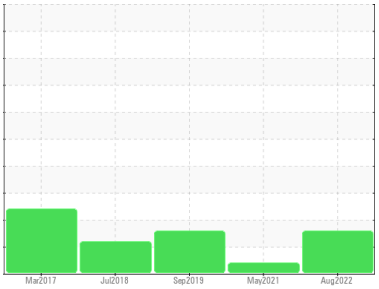
# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Machine Id
## KAESER CS 91 1627931 (S/N 1022)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

**▲ Recommendation**
The oil change at the time of sampling has been noted. We recommend you service the filters on this component. 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 | history 1 | history 2 |
|---|---|---|---|---|---|
| Sample Number | | | **KCP49488** | KCP35521 | KCP18257 |
| Sample Date | | | **23 Aug 2022** | 26 May 2021 | 09 Sep 2019 |
| Machine Age | hrs | | **48353** | 45449 | 41756 |
| Oil Age | hrs | | **2871** | 0 | 0 |
| Oil Changed | | | **Changed** | Changed | Not Changd |
| Sample Status | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **2** | 1 | 2 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >3 | **0** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >3 | **0** | 0 | <1 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >10 | **<1** | <1 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >50 | **4** | 4 | 6 |
| Tin | ppm | ASTM D5185m | >10 | **0** | <1 | 0 |
| Antimony | ppm | ASTM D5185m | | **---** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 14 | 0 |
| Barium | ppm | ASTM D5185m | 90 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **2** | 2 | 2 |
| Magnesium | ppm | ASTM D5185m | 90 | **43** | 44 | 38 |
| Calcium | ppm | ASTM D5185m | 2 | **0** | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | | **<1** | 1 | 2 |
| Zinc | ppm | ASTM D5185m | | **17** | 18 | 13 |
| Sulfur | ppm | ASTM D5185m | | **18213** | 16043 | 16028 |

| CONTAMINANTS | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **0** | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | **20** | 20 | 14 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 4 | 3 |
| Water | % | ASTM D6304 | >0.05 | **0.025** | 0.015 | 0.022 |
| ppm Water | ppm | ASTM D6304 | >500 | **250.3** | 158.6 | 227.0 |

| FLUID CLEANLINESS | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|
| Particles >4µm | ASTM D7647 | | **46725** | --- | 35388 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ **10232** | --- | ▲ 10595 |
| Particles >14µm | ASTM D7647 | >80 | ▲ **357** | --- | ▲ 907 |
| Particles >21µm | ASTM D7647 | >20 | ▲ **70** | --- | ▲ 227 |
| Particles >38µm | ASTM D7647 | >4 | **2** | --- | ▲ 7 |
| Particles >71µm | ASTM D7647 | >3 | **0** | --- | 0 |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13 | ▲ **23/21/16** | --- | ▲ 21/17 |

| FLUID DEGRADATION | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | **0.34** | 0.351 | 0.352 |

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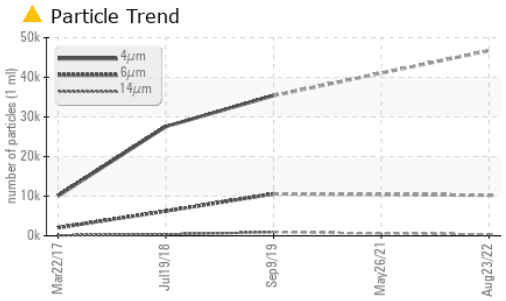
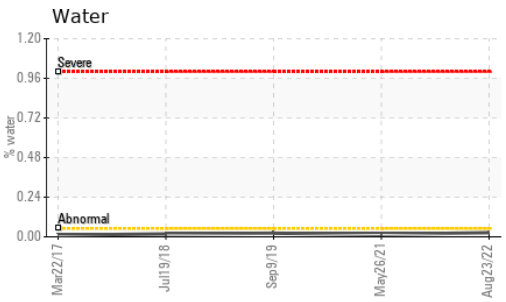
# OIL ANALYSIS REPORT



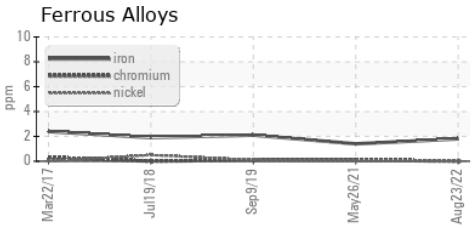



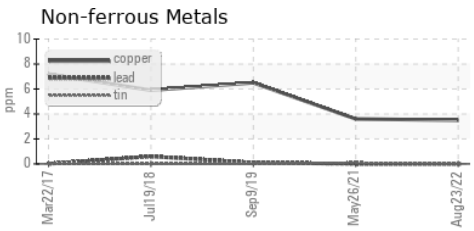

| VISUAL | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **LIGHT** | ▲ MODER | 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 |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

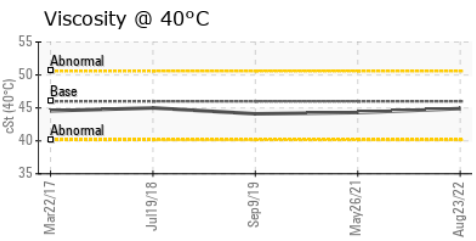
| FLUID PROPERTIES | | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **44.9** | 44.3 | 44.1 |

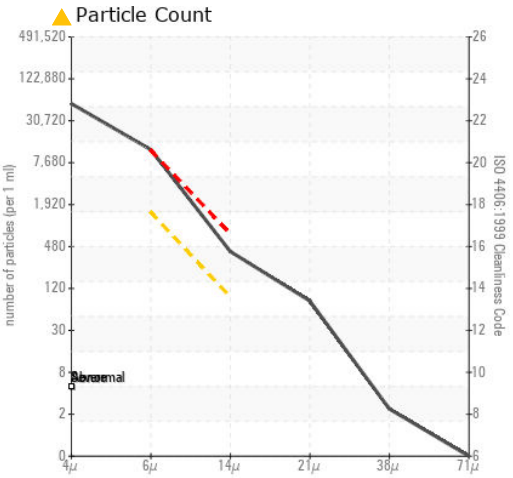
| SAMPLE IMAGES | method | limit/base | current | history 1 | history 2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

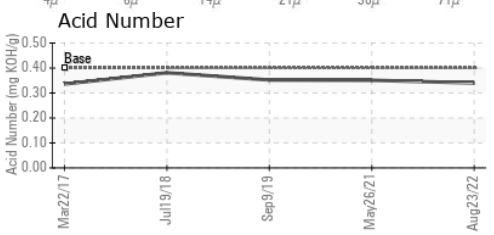
## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KCP49488 **Received** : 06 Sep 2022
**Lab Number** : 05635029 **Diagnosed** : 08 Sep 2022
**Unique Number** : 10124559 **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)*

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