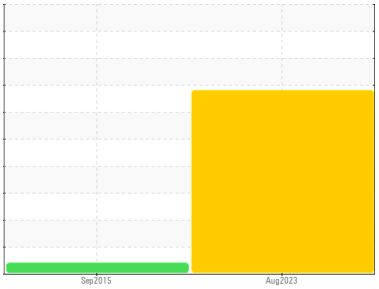
# PROBLEM SUMMARY

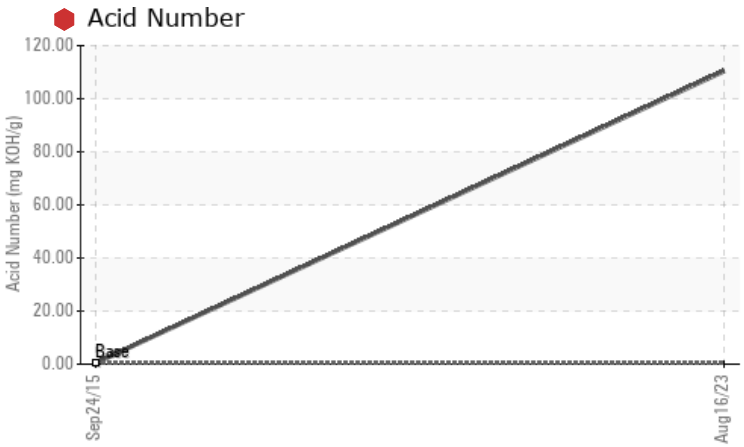
Sample Rating Trend

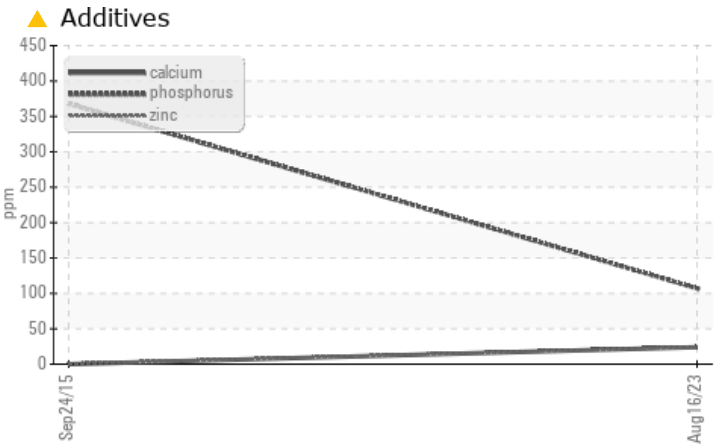



**DEGRADATION**

Machine Id
## KAESER BSD 50 3171294 (S/N 1672)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. The 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. Please note that the oil was too thick to perform some of the normal laboratory tests. We recommend an early resample in 500 hours to monitor this condition.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | SEVERE | ATTENTION | --- |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | ▲ 18 | 0 | --- |
| Calcium | ppm | ASTM D5185m | 2 | ▲ 24 | 0 | --- |
| Phosphorus | ppm | ASTM D5185m | | ▲ 107 | 368 | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | ⬢ 110.4 | 0.393 | --- |
| Debris | scalar | *Visual | NONE | ▲ MODER | NONE | --- |
| Emulsified Water | scalar | *Visual | >0.05 | ▲ 0.2% | NEG | --- |
| Free Water | scalar | *Visual | | ▲ 10.0 | NEG | --- |


**Customer Id:** PERGAI
**Sample No.:** KC05933584
**Lab Number:** 05933584
**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 | --- | --- | ? | We recommend that you drain the oil from the component if this has not already been done. |
| Alert | --- | --- | ? | We were unable to perform a particle count due to a high concentration of particles present in this sample. |

## HISTORICAL DIAGNOSIS

**24 Sep 2015 Diag: Doug Bogart**

**ADDITIVES**

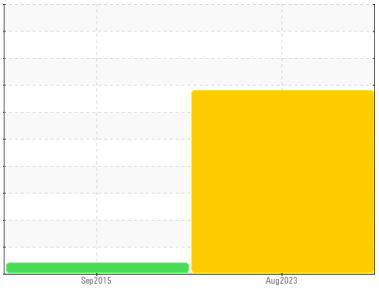
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable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

**view report**

KAESER COMPRESSORS
Built for a lifetime.

# OIL ANALYSIS REPORT

Sample Rating Trend




DEGRADATION

Machine Id
## KAESER BSD 50 3171294 (S/N 1672)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend that you drain the oil from the component if this has not already been done. The 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. Please note that the oil was too thick to perform some of the normal laboratory tests. We recommend an early resample in 500 hours to monitor this condition.

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

**Contamination**
Moderate concentration of visible dirt/debris present in the oil. Excessive free water present.

**Fluid Condition**
The AN level is well above the recommended limit.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **KC05933584** | KC03844406 | --- |
| Sample Date | | Client Info | | **16 Aug 2023** | 24 Sep 2015 | --- |
| Machine Age | hrs | Client Info | | **8057** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **SEVERE** | ATTENTION | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **16** | <1 | --- |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | 0 | --- |
| Nickel | ppm | ASTM D5185m | >3 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185m | >3 | **0** | 0 | --- |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >10 | **0** | 0 | --- |
| Lead | ppm | ASTM D5185m | >10 | **0** | <1 | --- |
| Copper | ppm | ASTM D5185m | >50 | **2** | <1 | --- |
| Tin | ppm | ASTM D5185m | >10 | **0** | <1 | --- |
| Antimony | ppm | ASTM D5185m | | **---** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **<1** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | ▲ **18** | 0 | --- |
| Barium | ppm | ASTM D5185m | 90 | **7** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 90 | **7** | <1 | --- |
| Calcium | ppm | ASTM D5185m | 2 | ▲ **24** | 0 | --- |
| Phosphorus | ppm | ASTM D5185m | | ▲ **107** | 368 | --- |
| Zinc | ppm | ASTM D5185m | | **24** | <1 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **3** | <1 | --- |
| Sodium | ppm | ASTM D5185m | | **8** | 1 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **3** | <1 | --- |
| Water | % | ASTM D6304 | >0.05 | **---** | 0.015 | --- |
| ppm Water | ppm | ASTM D6304 | >500 | **---** | 150 | --- |

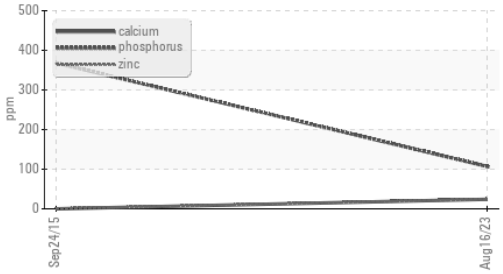
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **---** | 410 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **---** | 223 | --- |
| Particles >14µm | | ASTM D7647 | >80 | **---** | 38 | --- |
| Particles >21µm | | ASTM D7647 | >20 | **---** | 12 | --- |
| Particles >38µm | | ASTM D7647 | >4 | **---** | 1 | --- |
| Particles >71µm | | ASTM D7647 | >3 | **---** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | **---** | 15/12 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | ⬢ **110.4** | 0.393 | --- |

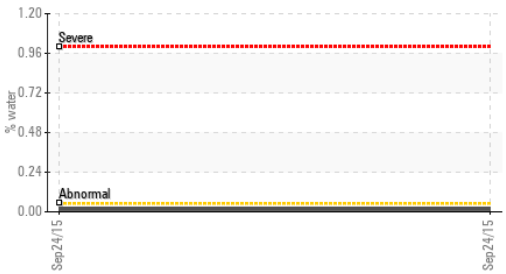
KAESER COMPRESSORS
Built for a lifetime.

# OIL ANALYSIS REPORT

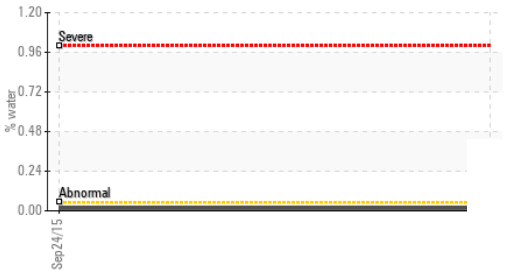
Additives



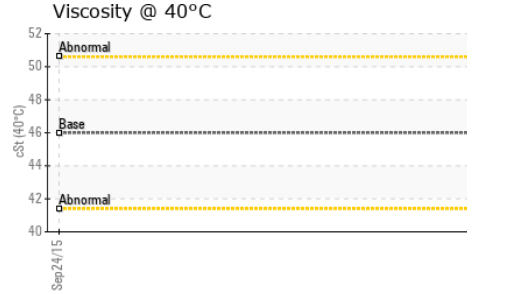

Water




Water

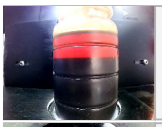



Viscosity @ 40°C



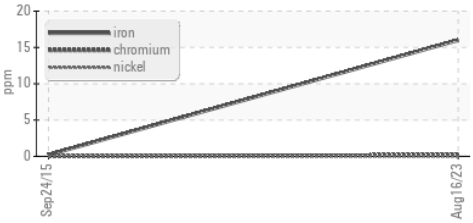

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Debris | scalar | *Visual | NONE | ▲ **MODER** | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Appearance | scalar | *Visual | NORML | **SOLID** | NORML | --- |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.05 | ▲ **0.2%** | NEG | --- |
| Free Water | scalar | *Visual | | ▲ **10.0** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **---** | 45.08 | --- |

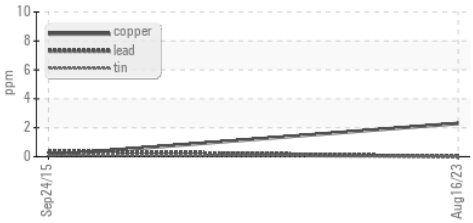
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

## GRAPHS

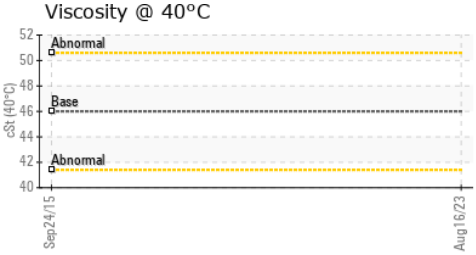
Ferrous Alloys



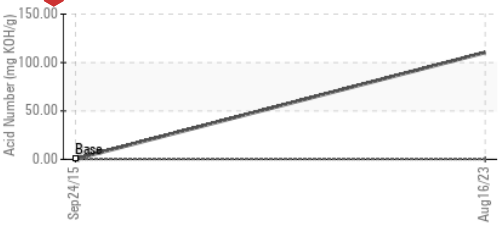

Non-ferrous Metals




Viscosity @ 40°C




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KC05933584
**Lab Number** : 05933584
**Unique Number** : 10618855
**Test Package** : IND 2

**Received** : 24 Aug 2023
**Diagnosed** : 28 Aug 2023
**Diagnostician** : Jonathan Hester

**PERDUE FARMS**
1155 CANDLER RD
GAINESVILLE, GA
US 30507
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: