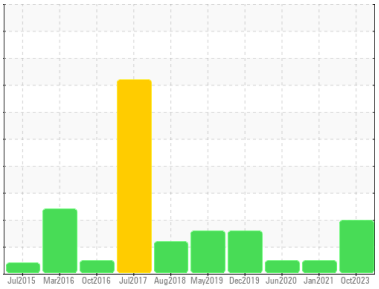
# PROBLEM SUMMARY

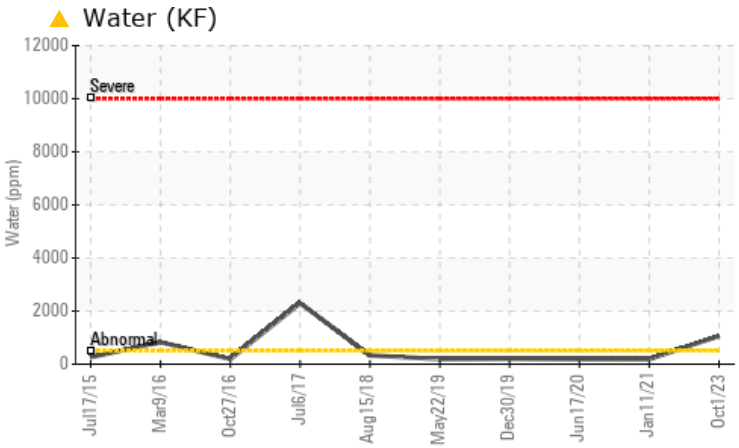
Sample Rating Trend




**WATER**

Machine Id
## KAESER ASD 40S 4953373 (S/N 1018)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- QTS)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

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. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | **ABNORMAL** | NORMAL | NORMAL |
|---|---|---|---|---|---|---|
| Water | % | ASTM D6304 | >0.05 | ▲ **0.106** | 0.018 | 0.018 |
| ppm Water | ppm | ASTM D6304 | >500 | ▲ **1060** | 184.6 | 187.4 |
| Debris | scalar | *Visual | NONE | ▲ **MODER** | NONE | NONE |

**Customer Id:** ONYFRA
**Sample No.:** KCPA006626
**Lab Number:** 05967030
**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 |
|---|---|---|---|---|
| Alert | --- | --- | ? | We were unable to perform a particle count due to a high concentration of particles present in this sample. |

## HISTORICAL DIAGNOSIS

**11 Jan 2021 Diag: Jonathan Hester**

NORMAL

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

view report

**17 Jun 2020 Diag: Angela Borella**

NORMAL

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. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

**30 Dec 2019 Diag: Doug Bogart**

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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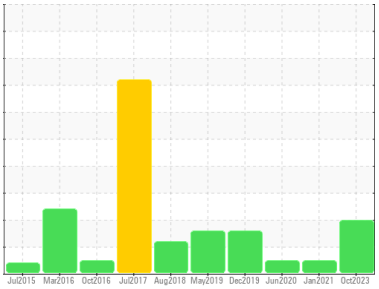
# OIL ANALYSIS REPORT

Sample Rating Trend




**WATER**

Machine Id
## KAESER ASD 40S 4953373 (S/N 1018)
Component
**Compressor**
Fluid
**KAESER SIGMA (OEM) S-460 (--- QTS)**

## DIAGNOSIS

**▲ Recommendation**

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. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

**Wear**

All component wear rates are normal.

**▲ Contamination**

There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris 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 | | **KCPA006626** | KCP30689 | KCP10039 |
| Sample Date | | Client Info | | **01 Oct 2023** | 11 Jan 2021 | 17 Jun 2020 |
| Machine Age | hrs | Client Info | | **29488** | 19860 | 17821 |
| Oil Age | hrs | Client Info | | **0** | 2039 | 3295 |
| Oil Changed | | Client Info | | **N/A** | Changed | Changed |
| Sample Status | | | | **ABNORMAL** | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **<1** | <1 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >3 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >3 | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | **2** | <1 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | **25** | 5 | 9 |
| 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 | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 10 | 0 |
| Barium | ppm | ASTM D5185m | 90 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 90 | **9** | 56 | 36 |
| Calcium | ppm | ASTM D5185m | 2 | **5** | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | **3** | 2 | <1 |
| Zinc | ppm | ASTM D5185m | | **63** | 30 | 96 |
| Sulfur | ppm | ASTM D5185m | | **18610** | 17576 | 13606 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >25 | **12** | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | **0** | 24 | 15 |
| Potassium | ppm | ASTM D5185m | >20 | **1** | 3 | 3 |
| Water | % | ASTM D6304 | >0.05 | ▲ **0.106** | 0.018 | 0.018 |
| ppm Water | ppm | ASTM D6304 | >500 | ▲ **1060** | 184.6 | 187.4 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **---** | 1441 | 3864 |
| Particles >6µm | | ASTM D7647 | >1300 | **---** | 522 | 1238 |
| Particles >14µm | | ASTM D7647 | >80 | **---** | 44 | 31 |
| Particles >21µm | | ASTM D7647 | >20 | **---** | 10 | 18 |
| Particles >38µm | | ASTM D7647 | >4 | **---** | 0 | 16 |
| Particles >71µm | | ASTM D7647 | >3 | **---** | 0 | 16 |
| Oil Cleanliness | | ISO 4406 (c) | >17/13 | **---** | 16/13 | 17/12 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | **0.30** | 0.370 | 0.359 |

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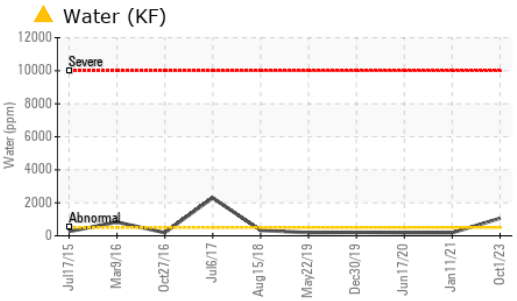
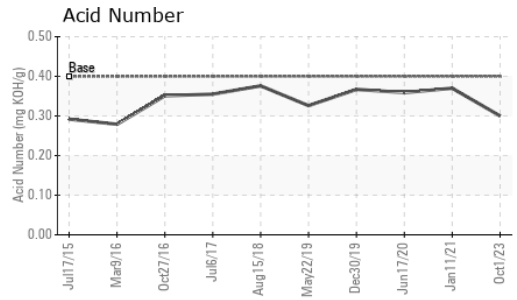
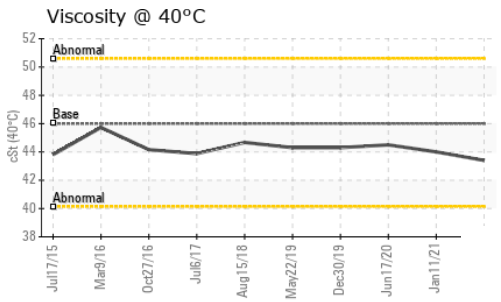
# OIL ANALYSIS REPORT



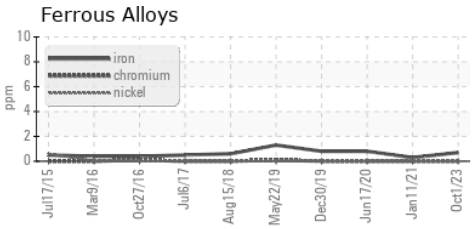



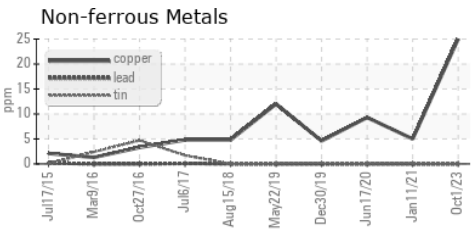

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | ▲ **MODER** | NONE | NONE |
| 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 |

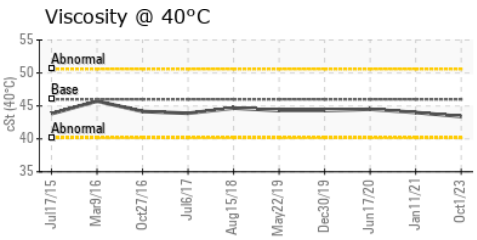
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46 | **43.4** | 44.0 | 44.5 |

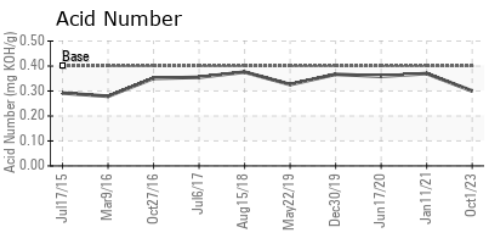
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS




ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KCPA006626 **Received** : 02 Oct 2023
**Lab Number** : 05967030 **Diagnosed** : 06 Oct 2023
**Unique Number** : 10673581 **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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