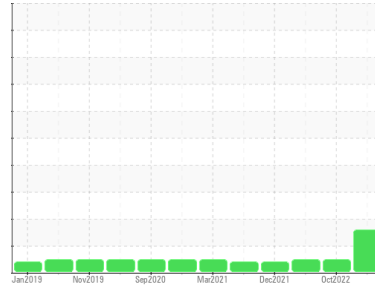




PROBLEM SUMMARY

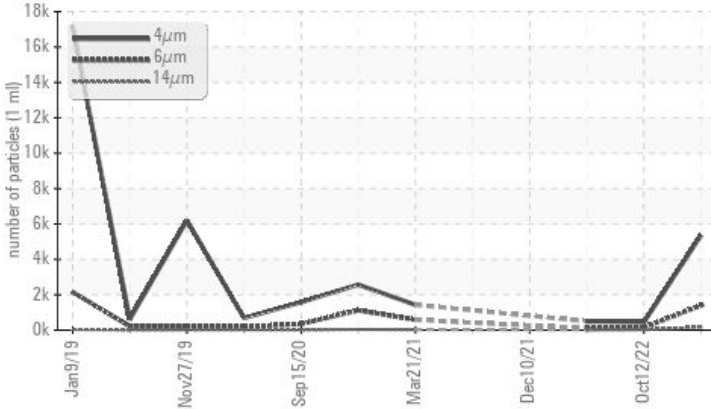
Sample Rating Trend



Machine Id
KAESER CSD 100S 6188597 (S/N 1190)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-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 | NORMAL | NORMAL |
|-----------------|--------------|-----------|-------------------|----------|----------|
| Particles >6µm | ASTM D7647 | >1300 | ▲ 1392 | 147 | 95 |
| Particles >14µm | ASTM D7647 | >80 | ▲ 169 | 23 | 13 |
| Particles >21µm | ASTM D7647 | >20 | ▲ 65 | 11 | 4 |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13 | ▲ 20/18/15 | 16/14/12 | 16/14/11 |

Customer Id: AUTSTR
 Sample No.: KC121457
 Lab Number: 05967048
 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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

12 Oct 2022 Diag: Don Baldrige

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



15 Jun 2022 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



10 Dec 2021 Diag: Don Baldrige

VIS DEBRIS



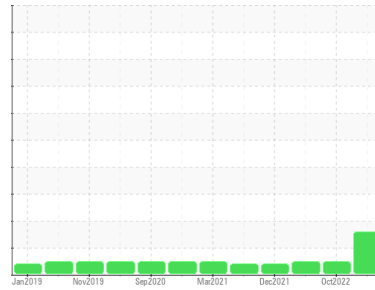
No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. 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



OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER CSD 100S 6188597 (S/N 1190)

Component

Compressor

Fluid

KAESER SIGMA (OEM) S-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 | | KC121457 | KC107878 | KC107379 |
| Sample Date | Client Info | | 28 Sep 2023 | 12 Oct 2022 | 15 Jun 2022 |
| Machine Age | hrs | Client Info | 22115 | 18844 | 17859 |
| Oil Age | hrs | Client Info | 0 | 985 | 783 |
| Oil Changed | Client Info | | N/A | Changed | Not Changed |
| Sample Status | | | ABNORMAL | NORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|------------|----------|----------|
| Iron | ppm | ASTM D5185m >50 | 0 | <1 | <1 |
| Chromium | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| 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 | 1 | 0 | 0 |
| Lead | ppm | ASTM D5185m >10 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m >50 | 11 | 6 | 9 |
| Tin | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185m | --- | --- | --- |
| 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 | 0 |
| Barium | ppm | ASTM D5185m 90 | 0 | 1 | 3 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m 90 | <1 | <1 | <1 |
| Calcium | ppm | ASTM D5185m 2 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | 4 | 14 | 15 |
| Zinc | ppm | ASTM D5185m | 0 | 0 | 0 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | 2 | 5 | 4 |
| Sodium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Potassium | ppm | ASTM D5185m >20 | <1 | <1 | <1 |
| Water | % | ASTM D6304 >0.05 | 0.009 | 0.003 | 0.016 |
| ppm Water | ppm | ASTM D6304 >500 | 90.5 | 37.7 | 163.7 |

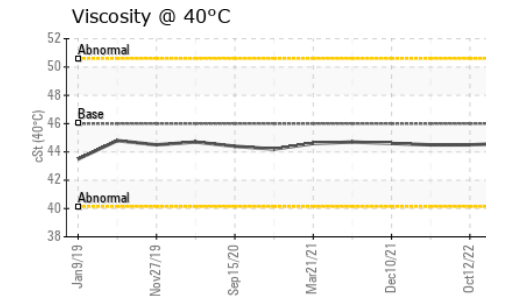
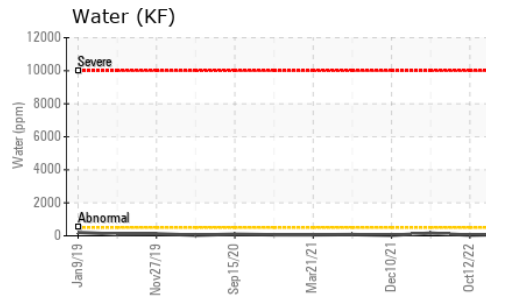
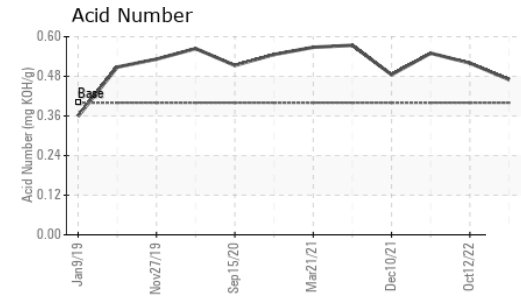
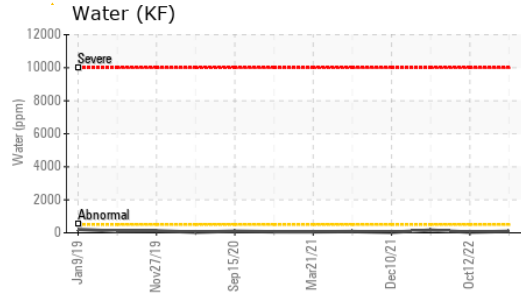
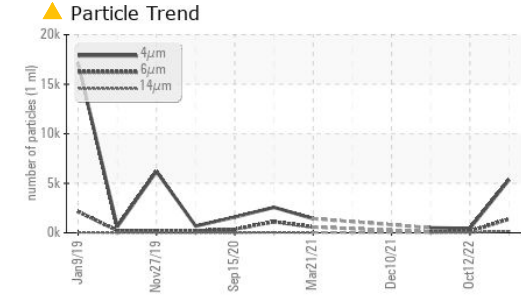
FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|------------------|------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 | | 5354 | 448 | 502 |
| Particles >6µm | ASTM D7647 >1300 | | ▲ 1392 | 147 | 95 |
| Particles >14µm | ASTM D7647 >80 | | ▲ 169 | 23 | 13 |
| Particles >21µm | ASTM D7647 >20 | | ▲ 65 | 11 | 4 |
| Particles >38µm | ASTM D7647 >4 | | 4 | 0 | 1 |
| Particles >71µm | ASTM D7647 >3 | | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13 | ▲ 20/18/15 | 16/14/12 | 16/14/11 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | 0.47 | 0.52 | 0.55 |

OIL ANALYSIS REPORT



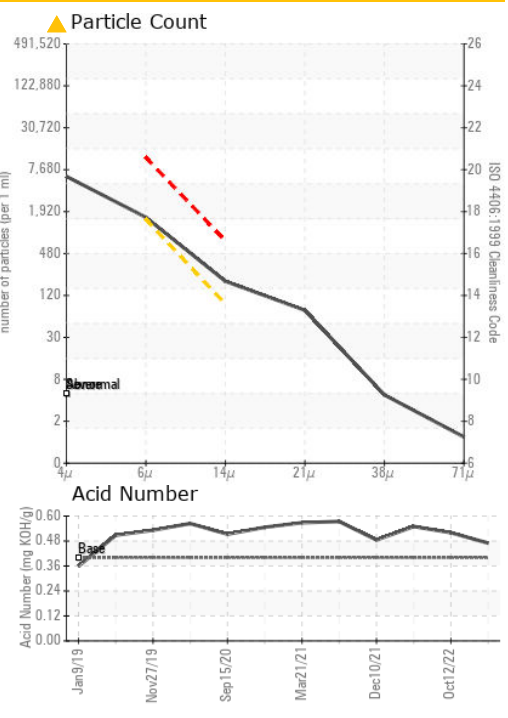
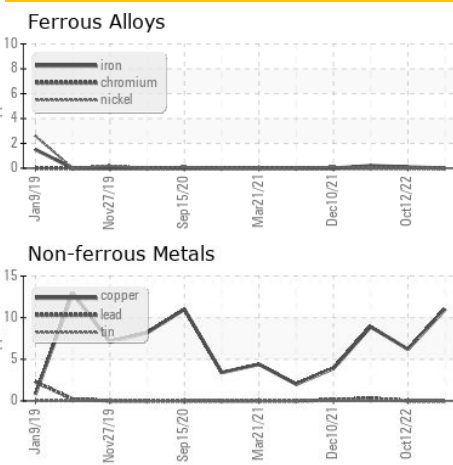
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE |
| 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 | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 46 | 44.6 | 44.5 | 44.5 |

SAMPLE IMAGES

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC121457 **Received** : 02 Oct 2023
Lab Number : 05967048 **Diagnosed** : 04 Oct 2023
Unique Number : 10673599 **Diagnostician** : Jonathan Hester
Test Package : IND 2

AUTOMATED PACKAGING
 600 MONDIAL PKWY
 STREETSBORO, OH
 US 44241
 Contact:

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: