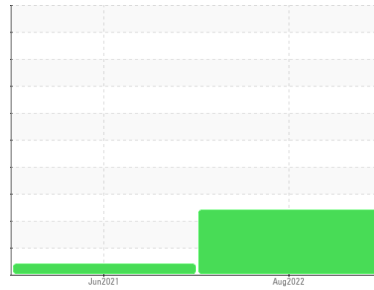


# PROBLEM SUMMARY

Sample Rating Trend



ISO



Machine Id  
**KAESER 3393273**

Component  
**Compressor**  
Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status   | ASTM D7647   | ASTM D7647 | ABNORMAL          | ABNORMAL | --- |
|-----------------|--------------|------------|-------------------|----------|-----|
| Particles >6µm  | ASTM D7647   | >1300      | ▲ <b>3808</b>     | ---      | --- |
| Particles >14µm | ASTM D7647   | >80        | ▲ <b>210</b>      | ---      | --- |
| Particles >21µm | ASTM D7647   | >20        | ▲ <b>35</b>       | ---      | --- |
| Particles >38µm | ASTM D7647   | >4         | ▲ <b>6</b>        | ---      | --- |
| Particles >71µm | ASTM D7647   | >3         | ▲ <b>3</b>        | ---      | --- |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13  | ▲ <b>21/19/15</b> | ---      | --- |

Customer Id: UNIHAT  
Sample No.: KC102203  
Lab Number: 05636575  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

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

## HISTORICAL DIAGNOSIS

15 Jun 2021 Diag: Don Baldrige

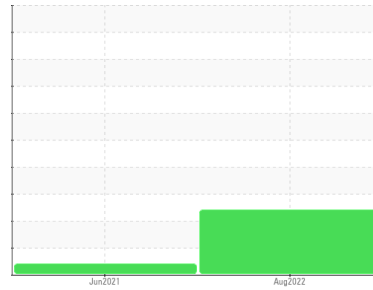
### VIS DEBRIS



No corrective action is recommended at this time. 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





Machine Id  
**KAESER 3393273**

Component  
**Compressor**  
Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

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 |        |            | <b>KC102203</b>    | KC68758     | ---       |
| Sample Date   |        |            | <b>22 Aug 2022</b> | 15 Jun 2021 | ---       |
| Machine Age   | hrs    |            | <b>98409</b>       | 98022       | ---       |
| Oil Age       | hrs    |            | <b>387</b>         | 10665       | ---       |
| Oil Changed   |        |            | <b>Not Chngd</b>   | Changed     | ---       |
| Sample Status |        |            | <b>ABNORMAL</b>    | ABNORMAL    | ---       |

## WEAR METALS

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

## ADDITIVES

|            | method | limit/base     | current      | history 1 | history 2 |
|------------|--------|----------------|--------------|-----------|-----------|
| Boron      | ppm    | ASTM D5185m    | <b>0</b>     | 5         | ---       |
| Barium     | ppm    | ASTM D5185m 90 | <b>0</b>     | 0         | ---       |
| Molybdenum | ppm    | ASTM D5185m    | <b>0</b>     | 0         | ---       |
| Manganese  | ppm    | ASTM D5185m    | <b>0</b>     | 0         | ---       |
| Magnesium  | ppm    | ASTM D5185m 90 | <b>0</b>     | <1        | ---       |
| Calcium    | ppm    | ASTM D5185m 2  | <b>0</b>     | 0         | ---       |
| Phosphorus | ppm    | ASTM D5185m    | <b>&lt;1</b> | 5         | ---       |
| Zinc       | ppm    | ASTM D5185m    | <b>&lt;1</b> | 0         | ---       |

## CONTAMINANTS

|           | method | limit/base       | current      | history 1 | history 2 |
|-----------|--------|------------------|--------------|-----------|-----------|
| Silicon   | ppm    | ASTM D5185m >25  | <b>0</b>     | 0         | ---       |
| Sodium    | ppm    | ASTM D5185m      | <b>&lt;1</b> | <1        | ---       |
| Potassium | ppm    | ASTM D5185m >20  | <b>0</b>     | 0         | ---       |
| Water     | %      | ASTM D6304 >0.05 | <b>0.007</b> | 0.011     | ---       |
| ppm Water | ppm    | ASTM D6304 >500  | <b>76.6</b>  | 112.8     | ---       |

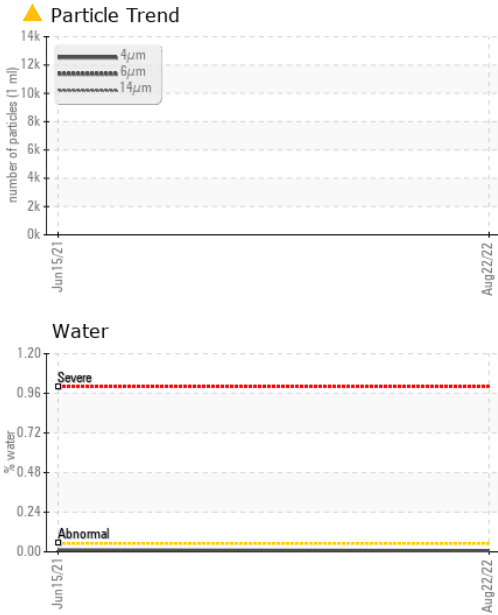
## FLUID CLEANLINESS

|                 | method       | limit/base | current           | history 1 | history 2 |
|-----------------|--------------|------------|-------------------|-----------|-----------|
| Particles >4µm  | ASTM D7647   |            | <b>11995</b>      | ---       | ---       |
| Particles >6µm  | ASTM D7647   | >1300      | <b>▲ 3808</b>     | ---       | ---       |
| Particles >14µm | ASTM D7647   | >80        | <b>▲ 210</b>      | ---       | ---       |
| Particles >21µm | ASTM D7647   | >20        | <b>▲ 35</b>       | ---       | ---       |
| Particles >38µm | ASTM D7647   | >4         | <b>▲ 6</b>        | ---       | ---       |
| Particles >71µm | ASTM D7647   | >3         | <b>▲ 3</b>        | ---       | ---       |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13  | <b>▲ 21/19/15</b> | ---       | ---       |

## FLUID DEGRADATION

|                  | method   | limit/base     | current     | history 1 | history 2 |
|------------------|----------|----------------|-------------|-----------|-----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | <b>0.41</b> | 0.466     | ---       |

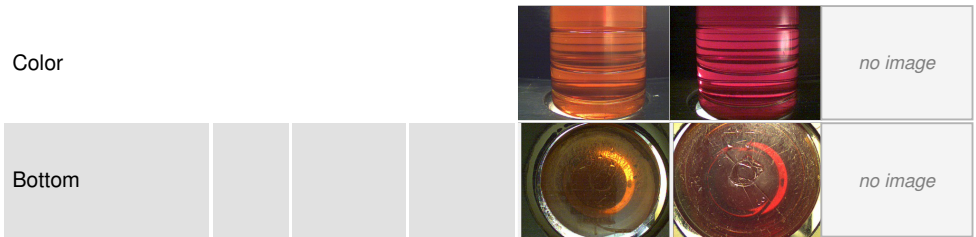
# OIL ANALYSIS REPORT



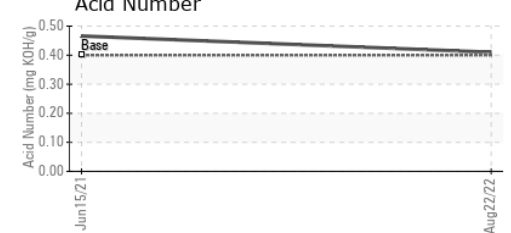
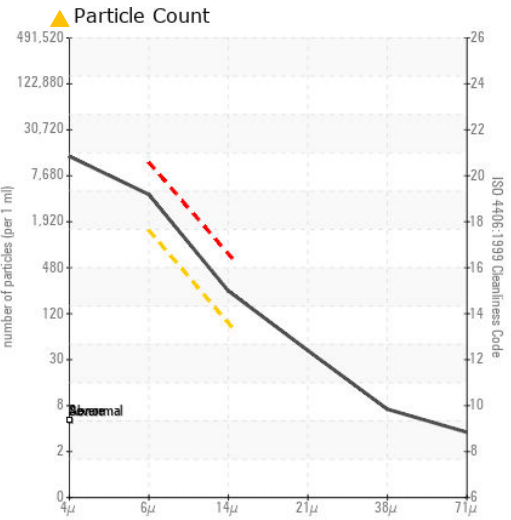
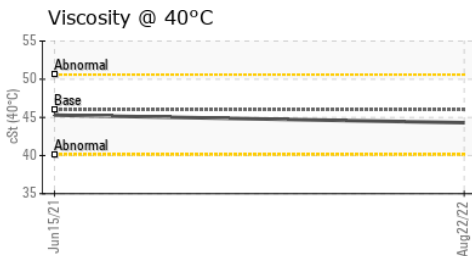
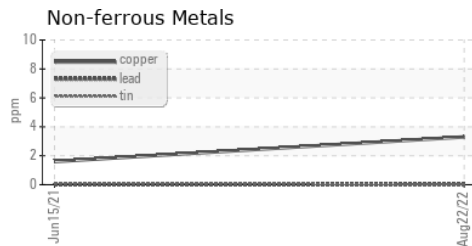
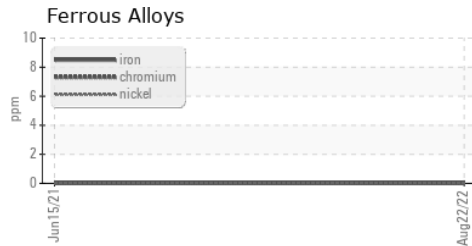
| VISUAL           | method | limit/base | current | history 1    | history 2 |
|------------------|--------|------------|---------|--------------|-----------|
| White Metal      | scalar | *Visual    | NONE    | NONE         | ---       |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE   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

| FLUID PROPERTIES | method | limit/base | current | history 1   | history 2 |
|------------------|--------|------------|---------|-------------|-----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 46      | <b>44.3</b> | 45.3      |

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



## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC102203  
**Lab Number** : 05636575  
**Unique Number** : 10126105  
**Test Package** : IND 2

UNIVERSITY OF SOUTHERN MS POLYMER SCIENCE RESEARCH  
 118 COLLEGE DR  
 HATTIESBURG, MS  
 USA 39406  
 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: