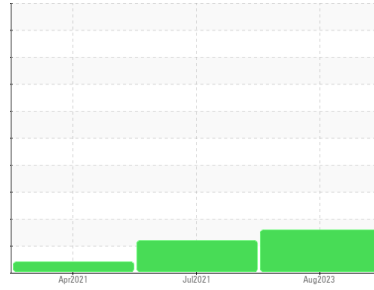




# PROBLEM SUMMARY

Sample Rating Trend



ISO



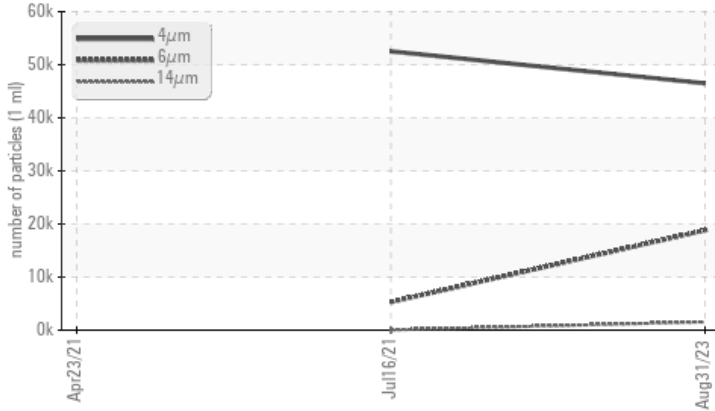
Machine Id  
**2473970 (S/N 1025)**

Component  
**Compressor**

Fluid  
**KAESER SIGMA (OEM) M-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

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.

## PROBLEMATIC TEST RESULTS

| Sample Status   |              |           | ABNORMAL   | ABNORMAL | ABNORMAL |
|-----------------|--------------|-----------|------------|----------|----------|
| Particles >6µm  | ASTM D7647   | >1300     | ▲ 18810    | ▲ 5274   | ---      |
| Particles >14µm | ASTM D7647   | >80       | ▲ 1553     | 41       | ---      |
| Particles >21µm | ASTM D7647   | >20       | ▲ 272      | 5        | ---      |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13 | ▲ 23/21/18 | ▲ 20/13  | ---      |

Customer Id: ACAROS  
Sample No.: KCP49632  
Lab Number: 05960607  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Angela Borella +1 800-237-1369  
[angela.borella@wearcheckusa.com](mailto:angela.borella@wearcheckusa.com)

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 Fluid  | ---    | ---  | ?       | Oil and filter change at the time of sampling has been noted. |
| Change Filter | ---    | ---  | ?       | Oil and filter change at the time of sampling has been noted. |

## HISTORICAL DIAGNOSIS

### 16 Jul 2021 Diag: Don Baldrige

#### WEAR



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. The aluminum level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



### 23 Apr 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.

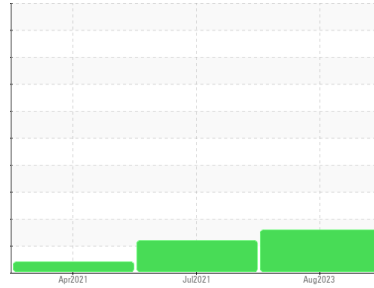
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**2473970 (S/N 1025)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) M-460 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

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.

### 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 |             |            | <b>KCP49632</b>    | KCP23009    | KCP35624    |
| Sample Date        | Client Info |             |            | <b>31 Aug 2023</b> | 16 Jul 2021 | 23 Apr 2021 |
| Machine Age        | hrs         | Client Info |            | <b>3708</b>        | 0           | 46587       |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 0           | 3365        |
| Oil Changed        | Client Info |             |            | <b>Changed</b>     | Changed     | Changed     |
| Sample Status      |             |             |            | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

| WEAR METALS |     | method      | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|---------|----------|----------|
| Iron        | ppm | ASTM D5185m | >50        | <1      | 6        | <1       |
| Chromium    | ppm | ASTM D5185m | >10        | 0       | <1       | 0        |
| Nickel      | ppm | ASTM D5185m | >3         | 0       | 0        | <1       |
| Titanium    | ppm | ASTM D5185m | >3         | 0       | 0        | 0        |
| Silver      | ppm | ASTM D5185m | >2         | <1      | <1       | 0        |
| Aluminum    | ppm | ASTM D5185m | >10        | 6       | ▲ 16     | <1       |
| Lead        | ppm | ASTM D5185m | >10        | 0       | 0        | 0        |
| Copper      | ppm | ASTM D5185m | >50        | 6       | 8        | <1       |
| Tin         | ppm | ASTM D5185m | >10        | 4       | 3        | 4        |
| Antimony    | ppm | ASTM D5185m |            | ---     | 0        | 0        |
| Vanadium    | ppm | ASTM D5185m |            | 0       | 0        | 0        |
| Cadmium     | ppm | ASTM D5185m |            | 0       | 0        | 0        |

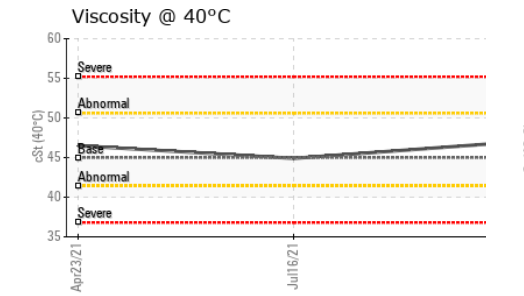
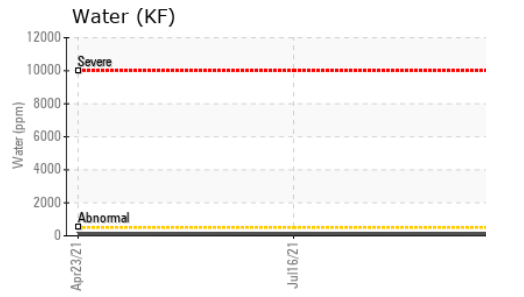
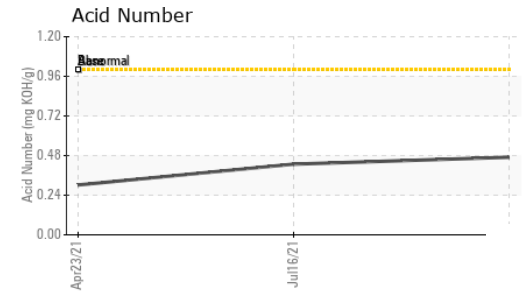
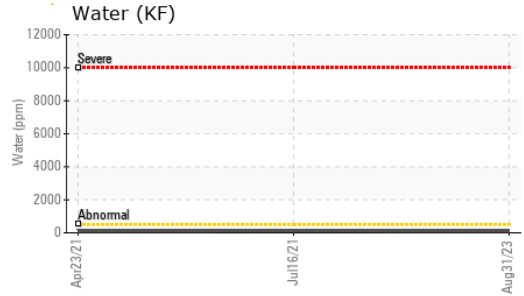
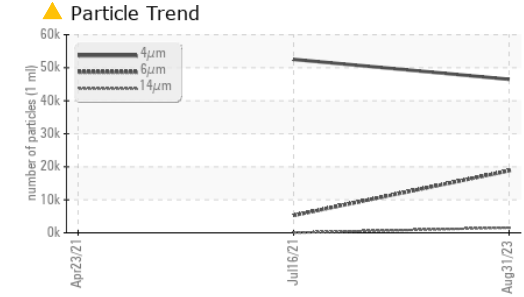
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 0          | 0            | <1       | <1       |
| Barium     | ppm | ASTM D5185m | 90         | 0            | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m | 0          | <1           | 0        | 0        |
| Manganese  | ppm | ASTM D5185m |            | <1           | <1       | 0        |
| Magnesium  | ppm | ASTM D5185m | 100        | 3            | 11       | <1       |
| Calcium    | ppm | ASTM D5185m | 0          | 1            | 0        | 0        |
| Phosphorus | ppm | ASTM D5185m | 0          | 7            | 16       | 22       |
| Zinc       | ppm | ASTM D5185m | 0          | 6            | 2        | 0        |
| Sulfur     | ppm | ASTM D5185m | 23500      | <b>22798</b> | 12305    | 461      |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >25        | <1           | <1       | 0        |
| Sodium       | ppm | ASTM D5185m |            | 4            | 2        | <1       |
| Potassium    | ppm | ASTM D5185m | >20        | 2            | 2        | <1       |
| Water        | %   | ASTM D6304  | >0.05      | <b>0.010</b> | 0.012    | 0.010    |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>108.8</b> | 125.2    | 106.1    |

| FLUID CLEANLINESS |  | method       | limit/base | current           | history1 | history2 |
|-------------------|--|--------------|------------|-------------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   |            | <b>46488</b>      | 52521    | ---      |
| Particles >6µm    |  | ASTM D7647   | >1300      | ▲ <b>18810</b>    | ▲ 5274   | ---      |
| Particles >14µm   |  | ASTM D7647   | >80        | ▲ <b>1553</b>     | 41       | ---      |
| Particles >21µm   |  | ASTM D7647   | >20        | ▲ <b>272</b>      | 5        | ---      |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>2</b>          | 0        | ---      |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>          | 0        | ---      |
| Oil Cleanliness   |  | ISO 4406 (c) | >--/17/13  | ▲ <b>23/21/18</b> | ▲ 20/13  | ---      |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 1.0        | <b>0.47</b> | 0.428    | 0.302    |

# OIL ANALYSIS REPORT

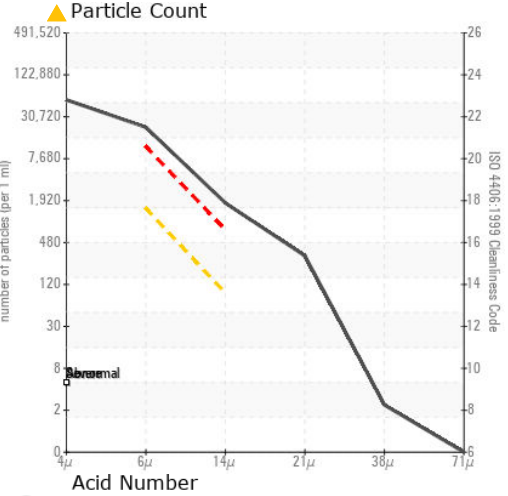
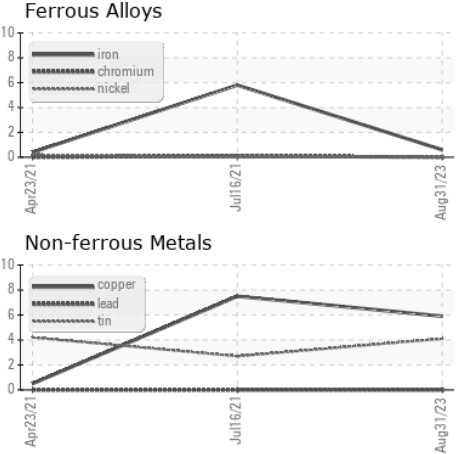


| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | ▲ MODER  |
| 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 45 | 46.9    | 44.9     | 46.5     |

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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCP49632 **Received** : 25 Sep 2023  
**Lab Number** : 05960607 **Diagnosed** : 27 Sep 2023  
**Unique Number** : 10661820 **Diagnostician** : Angela Borella  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**ACADIA WINDOWS & DOORS**  
 930 TODDS LN  
 ROSEDALE, MD  
 US 21237  
 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)