

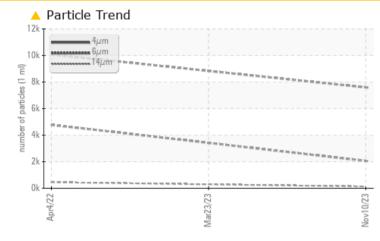
# **PROBLEM SUMMARY**

#### Machine Ic 7399000 (S/N 1817) Component

Built for a lifetime."

Compressor KAESER SIGMA (OEM) M-460 (--- GAL)

# COMPONENT CONDITION SUMMARY



# 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 ATTENTION ABNORMAL ABNORMAL Particles >6µm ASTM D7647 >1300 2060 **4776** Particles >14µm ASTM D7647 >80 **4**54 Particles >21µm ASTM D7647 >20 39 74 **Oil Cleanliness** ISO 4406 (c) >--/17/13 A 20/18/14 ▲ 19/16

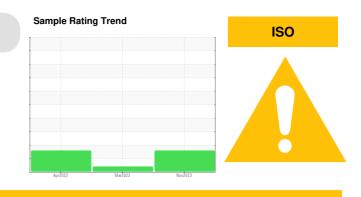
Customer Id: REPLAWGA Sample No.: KCPA009375 Lab Number: 06012415 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 dougb@wearcheckusa.com

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



There are no recommended actions for this sample.

# HISTORICAL DIAGNOSIS

# 23 Mar 2023 Diag: Angela Borella

VIS DEBRIS



# 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 acceptable for the time in service.



#### 04 Apr 2022 Diag: Don Baldridge

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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.





# **OIL ANALYSIS REPORT**

# Sample Rating Trend ISO

Machine Id 7399000 (S/N 1817) Component

Compressor Fluid KAESER SIGMA (OEM) M-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 moderate amount of particulates present in the oil.

#### Fluid Condition

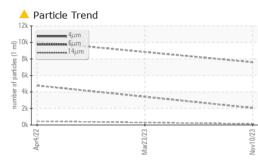
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

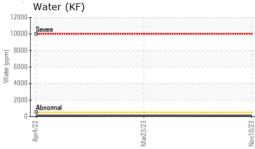
| SAMPLE INFORM    | IATION   | method       | limit/base | current           | history1    | history2    |
|------------------|----------|--------------|------------|-------------------|-------------|-------------|
| Sample Number    |          | Client Info  |            | KCPA009375        | KCPA001256  | KCP38456    |
| Sample Date      |          | Client Info  |            | 10 Nov 2023       | 23 Mar 2023 | 04 Apr 2022 |
| Machine Age      | hrs      | Client Info  |            | 11666             | 8258        | 4141        |
| Oil Age          | hrs      | Client Info  |            | 0                 | 0           | 4141        |
| Oil Changed      |          | Client Info  |            | N/A               | N/A         | Changed     |
| Sample Status    |          |              |            | ATTENTION         | ABNORMAL    | ABNORMAL    |
| WEAR METALS      |          | method       | limit/base | current           | history1    | history2    |
| Iron             | ppm      | ASTM D5185m  | >50        | 0                 | 0           | <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           | 0           |
| Aluminum         | ppm      | ASTM D5185m  | >10        | 0                 | <1          | 1           |
| Lead             | ppm      | ASTM D5185m  | >10        | 0                 | 0           | 0           |
| Copper           | ppm      | ASTM D5185m  | >50        | 9                 | 10          | 19          |
| Tin              | ppm      | ASTM D5185m  | >10        | 0                 | 0           | 0           |
| Vanadium         | ppm      | ASTM D5185m  |            | <1                | 0           | 0           |
| Cadmium          | ppm      | ASTM D5185m  |            | 0                 | 0           | 0           |
| ADDITIVES        |          | method       | limit/base | current           | history1    | history2    |
| Boron            | ppm      | ASTM D5185m  | 0          | 0                 | 0           | 0           |
| Barium           | ppm      | ASTM D5185m  | 90         | 0                 | 0           | 0           |
| Molybdenum       | ppm      | ASTM D5185m  | 0          | 0                 | 0           | 0           |
| Manganese        | ppm      | ASTM D5185m  |            | 0                 | <1          | <1          |
| Magnesium        | ppm      | ASTM D5185m  | 100        | 0                 | 2           | 15          |
| Calcium          | ppm      | ASTM D5185m  | 0          | 0                 | <1          | 0           |
| Phosphorus       | ppm      | ASTM D5185m  | 0          | 0                 | <1          | 6           |
| Zinc             | ppm      | ASTM D5185m  | 0          | 0                 | 45          | 85          |
| Sulfur           | ppm      | ASTM D5185m  | 23500      | 15548             | 22691       | 14893       |
| CONTAMINANTS     |          | method       | limit/base | current           | history1    | history2    |
| Silicon          | ppm      | ASTM D5185m  | >25        | <1                | <1          | <1          |
| Sodium           | ppm      | ASTM D5185m  |            | <1                | 1           | 4           |
| Potassium        | ppm      | ASTM D5185m  | >20        | 0                 | 0           | 0           |
| Water            | %        | ASTM D6304   | >0.05      | 0.012             | 0.010       | 0.013       |
| ppm Water        | ppm      | ASTM D6304   | >500       | 129.5             | 103.9       | 131.3       |
| FLUID CLEANLIN   | ESS      | method       | limit/base | current           | history1    | history2    |
| Particles >4µm   |          | ASTM D7647   |            | 7598              |             | 10074       |
| Particles >6µm   |          | ASTM D7647   | >1300      | <u> </u>          |             | <b>4776</b> |
| Particles >14µm  |          | ASTM D7647   | >80        | <u> </u>          |             | <b>4</b> 54 |
| Particles >21µm  |          | ASTM D7647   | >20        | <mark>/</mark> 39 |             | <u> </u>    |
| Particles >38µm  |          | ASTM D7647   | >4         | 4                 |             | <u> </u>    |
| Particles >71µm  |          | ASTM D7647   | >3         | 0                 |             | 0           |
| Oil Cleanliness  |          | ISO 4406 (c) | >/17/13    | <b>A</b> 20/18/14 |             | ▲ 19/16     |
| FLUID DEGRADA    | TION     | method       | limit/base | current           | history1    | history2    |
| Acid Number (AN) | mg KOH/g | ASTM D8045   | 1.0        | 0.41              | 0.40        | 0.37        |
|                  |          |              |            |                   |             |             |

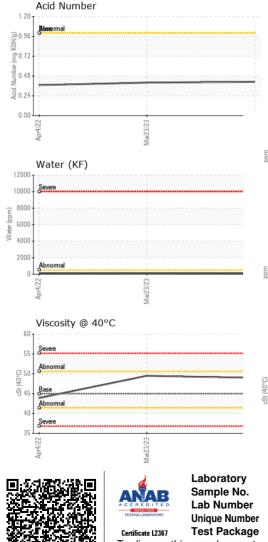
# 

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# **OIL ANALYSIS REPORT**

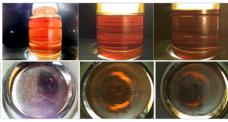




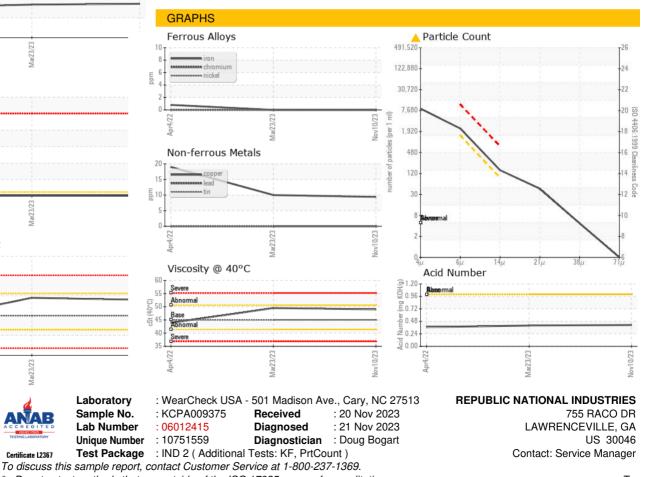


| VISUAL           |        | method    | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual   | NONE       | NONE    | NONE     | LIGHT    |
| Yellow Metal     | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual   | NONE       | LIGHT   | 🔺 MODER  | 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 PROPERT    | IES    | method    | limit/base | current | history1 | history2 |
| Visc @ 40°C      | cSt    | ASTM D445 | 45         | 49.0    | 49.5     | 43.9     |
| SAMPLE IMAGES    |        | method    | limit/base | current | history1 | history2 |
|                  |        |           |            |         |          |          |

Color



Bottom



\* - 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)

Contact/Location: Service Manager - REPLAWGA