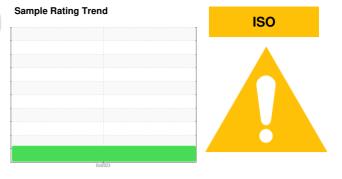


# **PROBLEM SUMMARY**



# Machine Id 8293065 (S/N 1846) Component

Compressor Fluid 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 |  |  |
| Particles >14µm          | ASTM D7647   | >80     | <u> </u>  |  |  |
| Particles >21µm          | ASTM D7647   | >20     | <u> </u>  |  |  |
| Oil Cleanliness          | ISO 4406 (c) | >/17/13 | <u> </u>  |  |  |

Customer Id: PACKSAN Sample No.: KCPA007832 Lab Number: 05981254 Test Package: IND 2



To manage this report scan the QR code

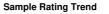
*To discuss the diagnosis or test data:* Jonathan Hester +1 919-379-4092 x4092 <u>jhester@wearcheckusa.com</u>

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



# **OIL ANALYSIS REPORT**





Machine Id 8293065 (S/N 1846) 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.

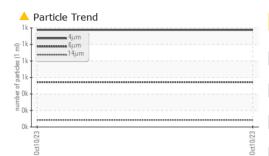
#### Fluid Condition

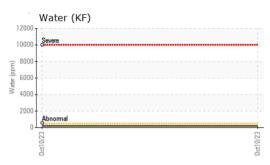
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

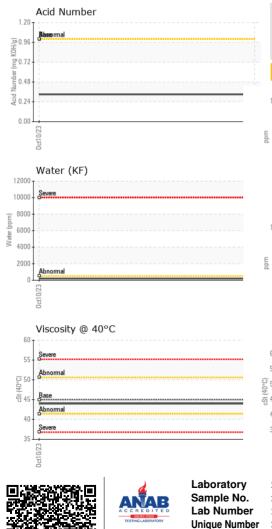
| SAMPLE INFORM    | ATION    | method       | limit/base | current         | history1 | history2 |
|------------------|----------|--------------|------------|-----------------|----------|----------|
| Sample Number    |          | Client Info  |            | KCPA007832      |          |          |
| Sample Date      |          | Client Info  |            | 10 Oct 2023     |          |          |
| Machine Age      | hrs      | Client Info  |            | 1580            |          |          |
| Oil Age          | hrs      | Client Info  |            | 0               |          |          |
| Oil Changed      |          | Client Info  |            | N/A             |          |          |
| Sample Status    |          |              |            | ATTENTION       |          |          |
| WEAR METALS      |          | method       | limit/base | current         | history1 | history2 |
| Iron             | ppm      | ASTM D5185m  | >50        | 0               |          |          |
| Chromium         | ppm      | ASTM D5185m  | >10        | 0               |          |          |
| Nickel           | ppm      | ASTM D5185m  | >3         | 0               |          |          |
| Titanium         | ppm      | ASTM D5185m  | >3         | 0               |          |          |
| Silver           | ppm      | ASTM D5185m  | >2         | <1              |          |          |
| Aluminum         | ppm      | ASTM D5185m  | >10        | 0               |          |          |
| Lead             | ppm      | ASTM D5185m  | >10        | 0               |          |          |
| Copper           | ppm      |              | >50        | 6               |          |          |
| Tin              | ppm      | ASTM D5185m  | >10        | 0               |          |          |
| Vanadium         | ppm      | ASTM D5185m  |            | 0               |          |          |
| Cadmium          | ppm      | ASTM D5185m  |            | 0               |          |          |
| ADDITIVES        |          | method       | limit/base | current         | history1 | history2 |
| Boron            | ppm      | ASTM D5185m  | 0          | 0               |          |          |
| Barium           | ppm      | ASTM D5185m  | 90         | 0               |          |          |
| Molybdenum       | ppm      | ASTM D5185m  | 0          | 0               |          |          |
| Manganese        | ppm      | ASTM D5185m  |            | 0               |          |          |
| Magnesium        | ppm      | ASTM D5185m  | 100        | 38              |          |          |
| Calcium          | ppm      | ASTM D5185m  | 0          | 0               |          |          |
| Phosphorus       | ppm      | ASTM D5185m  | 0          | 0               |          |          |
| Zinc             | ppm      | ASTM D5185m  |            | 0               |          |          |
| Sulfur           | ppm      | ASTM D5185m  | 23500      | 15516           |          |          |
| CONTAMINANTS     |          | method       | limit/base | current         | history1 | history2 |
| Silicon          | ppm      | ASTM D5185m  | >25        | 0               |          |          |
| Sodium           | ppm      | ASTM D5185m  |            | 9               |          |          |
| Potassium        | ppm      | ASTM D5185m  | >20        | 6               |          |          |
| Water            | %        | ASTM D6304   | >0.05      | 0.020           |          |          |
| ppm Water        | ppm      | ASTM D6304   | >500       | 207.8           |          |          |
| FLUID CLEANLINE  | ESS      | method       | limit/base | current         | history1 | history2 |
| Particles >4µm   |          | ASTM D7647   |            | 1175            |          |          |
| Particles >6µm   |          | ASTM D7647   | >1300      | 543             |          |          |
| Particles >14µm  |          | ASTM D7647   | >80        | <u> </u>        |          |          |
| Particles >21µm  |          | ASTM D7647   | >20        | <u> </u>        |          |          |
| Particles >38µm  |          | ASTM D7647   | >4         | 1               |          |          |
| Particles >71µm  |          | ASTM D7647   | >3         | 0               |          |          |
| Oil Cleanliness  |          | ISO 4406 (c) | >/17/13    | <b>17/16/14</b> |          |          |
| FLUID DEGRADA    | TION     | method       | limit/base | current         | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045   | 1.0        | 0.33            |          |          |
|                  |          |              |            |                 |          |          |



#### Built for a lifetime."







# **OIL ANALYSIS REPORT**

| VISUAL             |   | method            | limit/base   | current           | history1 | history2   |
|--------------------|---|-------------------|--|-------------------|----------|--|
| White Metal        | scalar                                    | *Visual           | NONE   | LIGHT             |          |  |
| Yellow Metal       | scalar                                    | *Visual           | NONE   | NONE              |          |  |
| Precipitate        | scalar                                    | *Visual           | NONE   | NONE              |          |  |
| Silt               | scalar                                    | *Visual           | NONE   | NONE              |          |  |
| Debris             | scalar                                    | *Visual           | NONE   | NONE              |          |  |
| Sand/Dirt          | scalar                                    | *Visual           | NONE   | NONE              |          |  |
| Appearance         | scalar                                    | *Visual           | NORML  | NORML             |          |  |
| Ddor               | scalar                                    | *Visual           | NORML  | NORML             |          |  |
| Emulsified Water   | scalar                                    | *Visual           | >0.05  | NEG               |          |  |
| ree Water          | scalar                                    | *Visual           |  | NEG               |          |  |
| FLUID PROPERT      | IES                                       | method            | limit/base   | current           | history1 | history2   |
| /isc @ 40°C        | cSt                                       | ASTM D445         | 45   | 44.0              |          |  |
| SAMPLE IMAGES      | 6   | method            | limit/base   | current           | history1 | history2   |
|                    |   |                   |  |                   |          |  |
| Color              |   |                   |  |                   | no image | no image   |
| Bottom             |   |                   |  |                   | no image | no image   |
| GRAPHS             |   |                   |  |                   |          |  |
| Ferrous Alloys     |   |                   |  | Particle Count    | -        |  |
| oct10/23           |   |                   | 491,520<br>122,880<br>30,720<br>7,680<br>E20<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10   |                   |          | -24<br>-22<br>-20<br>-20<br>-22<br>-20<br>-18<br>-16<br>-16<br>-16<br>-14<br>-14 |
| Non-ferrous Metals | 5   |                   | offred 480   |                   |          | -16 Cea  |
| copper             |   |                   | 5<br>120   |                   |          | -14 g  |
| tin                |   |                   |  |                   |          | +12  |
|                    |   |                   | 30   | ļ                 |          | +12  |
|                    |   |                   | 8  | <b>Seven</b> emal |          | -10  |
| <br>53             |   |                   | -  |                   |          |  |
| 0ct1 0/23          |   |                   | 0ct10/23   |                   |          |  |
| Viscosity @ 40°C   |   |                   | 9  | μ<br>Acid Number  | 14µ 21µ  | 38µ 71µ  |
| Severe             |   |                   | <u> </u>   |                   |          |  |
| Abnormal           | ******                                    |                   | HOX 0.96   |                   |          |  |
| Base               |   |                   | ຍັ 0.72<br>ສ   | •                 |          |  |
| Abnormal           |   |                   | (b)HO 36<br>WHO 36<br>WHO 36<br>WHO 36<br>WHO 372<br>WHO 372 |                   |          |  |
| Severe             |   |                   | 0.24   |                   |          |  |
| 0/23               |   |                   | 0.00   |                   |          | )/23 -   |
| 0ct10/23           |   |                   | 0ct10/23   | 0ct10/23          |          | 0ct10/2  |
| 05981254           | 01 Madi<br>Received<br>Diagnos<br>Diagnos | d :170<br>ed :190 | ry, NC 27513<br>Oct 2023<br>Oct 2023<br>athan Hester   |                   | 3744     | YOUR FOODS<br>WARNER AVE<br>ANTA ANA, CA<br>US 92704                             |



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.

Test Package : IND 2 (Additional Tests: KF, PrtCount)

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact: Service Manager

Certificate L2367

Contact/Location: Service Manager - PACKSAN

T:

F: