

# **OIL ANALYSIS REPORT**

## Sample Rating Trend



# Machine Id **7028303 (S/N 1382)** Component

**Compressor** 

KAESER SIGMA (OEM) S-460 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

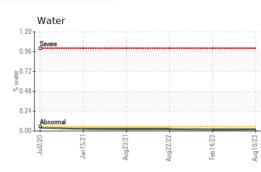
## Fluid Condition

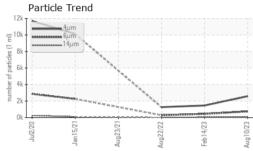
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

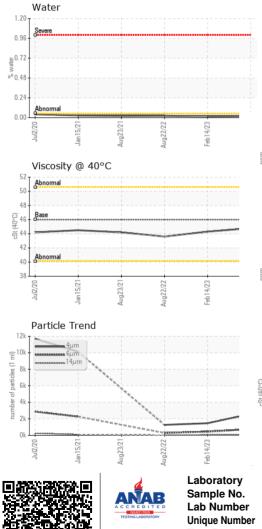
|                  |               | Jul2020      | Jan2021 Aug202 | 1 Aug2022 Feb2023 | Aug2023     |             |
|------------------|---------------|--------------|----------------|-------------------|-------------|-------------|
| SAMPLE INFORM    | <b>IATION</b> | method       | limit/base     | current           | history1    | history2    |
| Sample Number    |               | Client Info  |                | KC122701          | KC103846    | KC98122     |
| Sample Date      |               | Client Info  |                | 10 Aug 2023       | 14 Feb 2023 | 22 Aug 2022 |
| Machine Age      | hrs           | Client Info  |                | 5405              | 4665        | 3673        |
| Oil Age          | hrs           | Client Info  |                | 2966              | 2058        | 1066        |
| Oil Changed      |               | Client Info  |                | Not Changd        | Changed     | Not Changd  |
| Sample Status    |               |              |                | NORMAL            | NORMAL      | NORMAL      |
| WEAR METALS      |               | method       | limit/base     | current           | history1    | history2    |
| Iron             | ppm           | ASTM D5185m  | >50            | <1                | 0           | <1          |
| Chromium         | ppm           | ASTM D5185m  | >10            | 0                 | 0           | <1          |
| 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            | <1                | 0           | 2           |
| Lead             | ppm           | ASTM D5185m  | >10            | <1                | 0           | <1          |
| Copper           | ppm           | ASTM D5185m  | >50            | 5                 | 4           | 1           |
| Tin              | ppm           | ASTM D5185m  | >10            | 0                 | 0           | <1          |
| Antimony         | ppm           | ASTM D5185m  |                |                   |             |             |
| Vanadium         | ppm           | ASTM D5185m  |                | 0                 | 0           | <1          |
| Cadmium          | ppm           | ASTM D5185m  |                | 0                 | <1          | <1          |
| ADDITIVES        |               | method       | limit/base     | current           | history1    | history2    |
| Boron            | ppm           | ASTM D5185m  |                | 0                 | 0           | 0           |
| Barium           | ppm           | ASTM D5185m  | 90             | 0                 | 0           | 20          |
| Molybdenum       | ppm           | ASTM D5185m  |                | 0                 | 0           | 0           |
| Manganese        | ppm           | ASTM D5185m  |                | 0                 | <1          | <1          |
| Magnesium        | ppm           | ASTM D5185m  | 90             | 39                | 41          | 76          |
| Calcium          | ppm           | ASTM D5185m  | 2              | <1                | <1          | 2           |
| Phosphorus       | ppm           | ASTM D5185m  |                | 2                 | 7           | 2           |
| Zinc             | ppm           | ASTM D5185m  |                | 5                 | 24          | <1          |
| CONTAMINANTS     | ;             | method       | limit/base     | current           | history1    | history2    |
| Silicon          | ppm           | ASTM D5185m  | >25            | <1                | <1          | <1          |
| Sodium           | ppm           | ASTM D5185m  |                | 13                | 10          | 10          |
| Potassium        | ppm           | ASTM D5185m  | >20            | 2                 | 3           | 3           |
| Water            | %             | ASTM D6304   | >0.05          | 0.020             | 0.017       | 0.023       |
| ppm Water        | ppm           | ASTM D6304   | >500           | 202.1             | 179.3       | 230.3       |
| FLUID CLEANLIN   | IESS          | method       | limit/base     | current           | history1    | history2    |
| Particles >4µm   |               | ASTM D7647   |                | 2586              | 1463        | 1267        |
| Particles >6µm   |               | ASTM D7647   | >1300          | 747               | 449         | 285         |
| Particles >14µm  |               | ASTM D7647   | >80            | 61                | 37          | 27          |
| Particles >21µm  |               | ASTM D7647   | >20            | 20                | 9           | 8           |
| Particles >38µm  |               | ASTM D7647   | >4             | 1                 | 0           | 0           |
| Particles >71µm  |               | ASTM D7647   | >3             | 0                 | 0           | 0           |
| Oil Cleanliness  |               | ISO 4406 (c) | >/17/13        | 19/17/13          | 18/16/12    | 17/15/12    |
| FLUID DEGRADA    |               | method       | limit/base     | current           | history1    | history2    |
| Acid Number (AN) | mg KOH/g      | ASTM D8045   | 0.4            | 0.42              | 0.39        | 0.37        |
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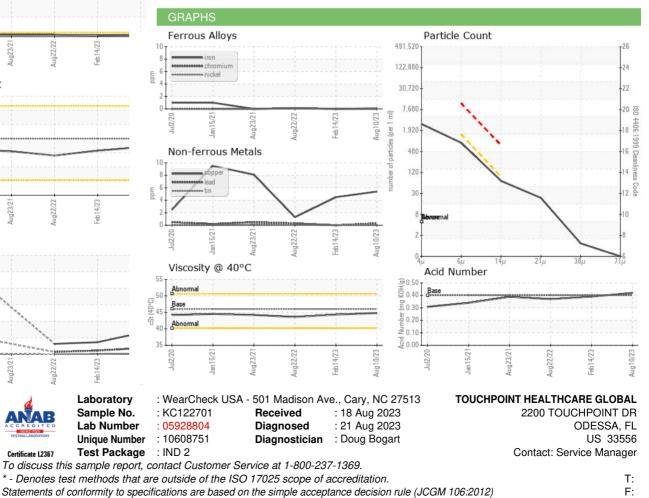






| VISUAL           |        | method    | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual   | NONE       | NONE    | NONE     | LIGHT    |
| Yellow Metal     | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual   | NONE       | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual   | NONE       | NONE    | NONE     | 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 PROPERTIES |        | method    | limit/base | current | history1 | history2 |
| Visc @ 40°C      | cSt    | ASTM D445 | 46         | 44.8    | 44.3     | 43.6     |
| SAMPLE IMAGES    |        | method    | limit/base | current | history1 | history2 |
| Color            |        |           |            |         |          |          |
| Bottom           |        |           |            |         |          |          |

Bottom



Contact/Location: Service Manager - TOUODE