

# **OIL ANALYSIS REPORT**

### Sample Rating Trend

ISO

KAESER 7336545

#### Compressor Fluid KAESER SIGMA (OEM) S-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 high amount of particulates present in the oil.

#### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

|                  |          |              | Apr2023    | Jan2024           |             |          |
|------------------|----------|--------------|------------|-------------------|-------------|----------|
| SAMPLE INFORM    | MATION   | method       | limit/base | current           | history1    | history2 |
| Sample Number    |          | Client Info  |            | KC06133322        | KC101380    |          |
| Sample Date      |          | Client Info  |            | 17 Jan 2024       | 26 Apr 2023 |          |
| Machine Age      | hrs      | Client Info  |            | 26530             | 21824       |          |
| Oil Age          | hrs      | Client Info  |            | 0                 | 4864        |          |
| Oil Changed      |          | Client Info  |            | N/A               | Changed     |          |
| Sample Status    |          |              |            | ABNORMAL          | NORMAL      |          |
| WEAR METALS      |          | method       | limit/base | current           | history1    | history2 |
| Iron             | ppm      | ASTM D5185m  | >50        | 0                 | 0           |          |
| Chromium         | ppm      | ASTM D5185m  | >10        | <1                | <1          |          |
| Nickel           | ppm      | ASTM D5185m  | >3         | 0                 | <1          |          |
| Titanium         | ppm      | ASTM D5185m  | >3         | <1                | 0           |          |
| Silver           | ppm      | ASTM D5185m  | >2         | 0                 | 0           |          |
| Aluminum         | ppm      | ASTM D5185m  | >10        | 3                 | <1          |          |
| Lead             | ppm      | ASTM D5185m  | >10        | <1                | 0           |          |
| Copper           | ppm      | ASTM D5185m  | >50        | 9                 | 16          |          |
| Tin              | ppm      | ASTM D5185m  | >10        | <1                | 0           |          |
| Vanadium         | ppm      | ASTM D5185m  | _          | <1                | 0           |          |
| Cadmium          | ppm      | ASTM D5185m  |            | <1                | 0           |          |
| ADDITIVES        | ppin     | method       | limit/base |                   | -           | history2 |
|                  |          |              | inniv base | current           | history1    | nistory2 |
| Boron            | ppm      | ASTM D5185m  |            | 0                 | 0           |          |
| Barium           | ppm      | ASTM D5185m  | 90         | 11                | 0           |          |
| Molybdenum       | ppm      | ASTM D5185m  |            | 0                 | 0           |          |
| Manganese        | ppm      | ASTM D5185m  |            | 0                 | <1          |          |
| Magnesium        | ppm      | ASTM D5185m  | 90         | 19                | <1          |          |
| Calcium          | ppm      | ASTM D5185m  | 2          | 3                 | 0           |          |
| Phosphorus       | ppm      | ASTM D5185m  |            | 0                 | 0           |          |
| Zinc             | ppm      | ASTM D5185m  |            | 26                | 8           |          |
| CONTAMINANTS     | 6        | method       | limit/base | current           | history1    | history2 |
| Silicon          | ppm      | ASTM D5185m  | >25        | 0                 | 0           |          |
| Sodium           | ppm      | ASTM D5185m  |            | 4                 | 1           |          |
| Potassium        | ppm      | ASTM D5185m  | >20        | 2                 | 3           |          |
| Water            | %        | ASTM D6304   | >0.05      | 0.011             | 0.003       |          |
| ppm Water        | ppm      | ASTM D6304   | >500       | 115               | 27.1        |          |
| FLUID CLEANLIN   | IESS     | method       | limit/base | current           | history1    | history2 |
| Particles >4µm   |          | ASTM D7647   |            | 17589             | 2644        |          |
| Particles >6µm   |          | ASTM D7647   | >1300      | <u> </u>          | 787         |          |
| Particles >14µm  |          | ASTM D7647   | >80        | <b>A</b> 326      | 59          |          |
| Particles >21µm  |          | ASTM D7647   | >20        | <u> </u>          | 16          |          |
| Particles >38µm  |          | ASTM D7647   | >4         | 1                 | 0           |          |
| Particles >71µm  |          | ASTM D7647   | >3         | 0                 | 0           |          |
| Oil Cleanliness  |          | ISO 4406 (c) | >/17/13    | <b>A</b> 21/20/16 | 19/17/13    |          |
| FLUID DEGRADA    | ATION    | method       | limit/base | current           | history1    | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045   | 0.4        | 0.33              | 0.26        |          |
|                  |          |              |            |                   |             |          |



# **OIL ANALYSIS REPORT**

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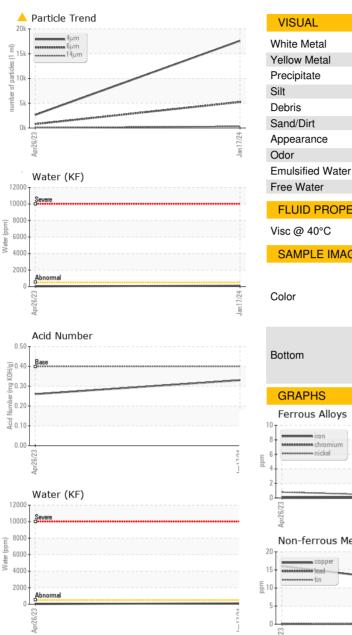
history2

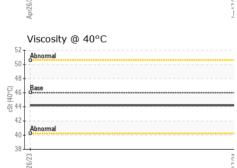
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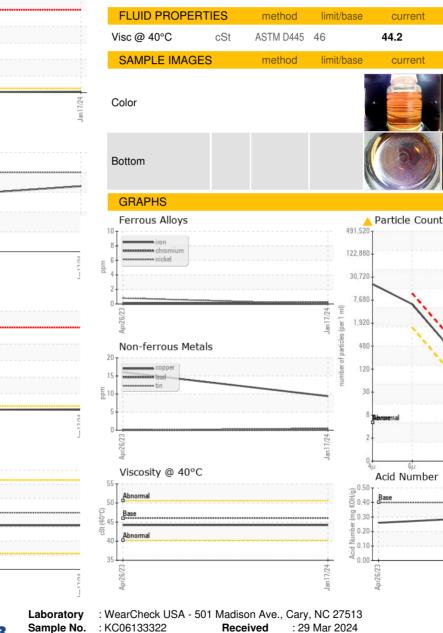
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UNION PACIFIC - LIVONIA 2173 MARINGOUIN RD W LIVONIA, LA US 70757 Contact: Service Manager

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Certificate 12367 Test Package : IND 2 To discuss this sample report, contact Customer Service at 1-800-237-1369.

: 06133322

\* - 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)

Tested

Diagnosed

:01 Apr 2024

: 01 Apr 2024 - Doug Bogart

Lab Number

Unique Number : 10952787

Contact/Location: Service Manager - UNILIV