

# **OIL ANALYSIS REPORT**

## Sample Rating Trend



# Machine Id KAESER CSD100S 6188608 (S/N 1191)

Compressor

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

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

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

## **Fluid Condition**

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

|                          |        | Jul2018 Apr  | 2019 Nov2019 Sep2020 | Mar2021 Sep2021 Dec2021 Jun20 | 22 Sep2023  |             |
|--------------------------|--------|--------------|----------------------|-------------------------------|-------------|-------------|
| SAMPLE INFORM            | MATION | method       | limit/base           | current                       | history1    | history2    |
| Sample Number            |        | Client Info  |                      | KC121355                      | KC107329    | KC96003     |
| Sample Date              |        | Client Info  |                      | 28 Sep 2023                   | 15 Jun 2022 | 10 Dec 2021 |
| Machine Age              | hrs    | Client Info  |                      | 22213                         | 18089       | 15460       |
| Oil Age                  | hrs    | Client Info  |                      | 0                             | 971         | 2300        |
| Oil Changed              |        | Client Info  |                      | N/A                           | Changed     | Not Changd  |
| Sample Status            |        |              |                      | NORMAL                        | NORMAL      | ABNORMAL    |
| WEAR METALS              |        | method       | limit/base           | current                       | history1    | history2    |
| Iron                     | ppm    | ASTM D5185m  | >50                  | 0                             | 0           | 0           |
| 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           | <1          |
| Aluminum                 | ppm    | ASTM D5185m  | >10                  | 1                             | 0           | 0           |
| Lead                     | ppm    | ASTM D5185m  | >10                  | 0                             | 0           | 0           |
| Copper                   | ppm    | ASTM D5185m  | >50                  | 6                             | 7           | 8           |
| Tin                      | ppm    | ASTM D5185m  | >10                  | 0                             | 0           | <1          |
| Antimony                 | ppm    | ASTM D5185m  |                      |                               |             | 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                             | <1          | 13          |
| Barium                   | ppm    | ASTM D5185m  | 90                   | 0                             | 0           | 0           |
| Molybdenum               | ppm    | ASTM D5185m  |                      | 0                             | 0           | 0           |
| Manganese                | ppm    | ASTM D5185m  |                      | 0                             | 0           | 0           |
| Magnesium                | ppm    | ASTM D5185m  | 90                   | 1                             | 0           | 0           |
| Calcium                  | ppm    | ASTM D5185m  | 2                    | 0                             | 0           | 0           |
| Phosphorus               | ppm    | ASTM D5185m  |                      | 2                             | 6           | 2           |
| Zinc                     | ppm    | ASTM D5185m  |                      | 0                             | 0           | 0           |
| CONTAMINANTS             |        | method       | limit/base           | current                       | history1    | history2    |
| Silicon                  | ppm    | ASTM D5185m  | >25                  | <1                            | 4           | 5           |
| Sodium                   | ppm    | ASTM D5185m  |                      | 0                             | 0           | <1          |
| Potassium                | ppm    | ASTM D5185m  | >20                  | <1                            | 0           | 0           |
| Water                    | %      | ASTM D6304   | >0.05                | 0.003                         | 0.006       | 0.003       |
| ppm Water                | ppm    | ASTM D6304   | >500                 | 27.1                          | 60.5        | 26.7        |
| FLUID CLEANLIN           | ESS    | method       | limit/base           | current                       | history1    | history2    |
| Particles >4µm           |        | ASTM D7647   |                      | 3141                          | 296         |             |
| Particles >6µm           |        | ASTM D7647   | >1300                | 648                           | 82          |             |
| Particles >14µm          |        | ASTM D7647   | >80                  | 43                            | 7           |             |
| Particles >21µm          |        | ASTM D7647   | >20                  | 15                            | 2           |             |
| Particles >38µm          |        | ASTM D7647   | >4                   | 1                             | 0           |             |
| Particles >71µm          |        | ASTM D7647   | >3                   | 1                             | 0           |             |
| Oil Cleanliness          |        | ISO 4406 (c) | >/17/13              | 19/17/13                      | 15/14/10    |             |
| FLUID DEGRADA            | TION   | method       | limit/base           | current                       | history1    | history2    |
| A = ! =   N     (A N   ) |        | AOTM D0045   | 0.4                  | 0.20                          | 0.50        | 0.470       |

0.39

Acid Number (AN)

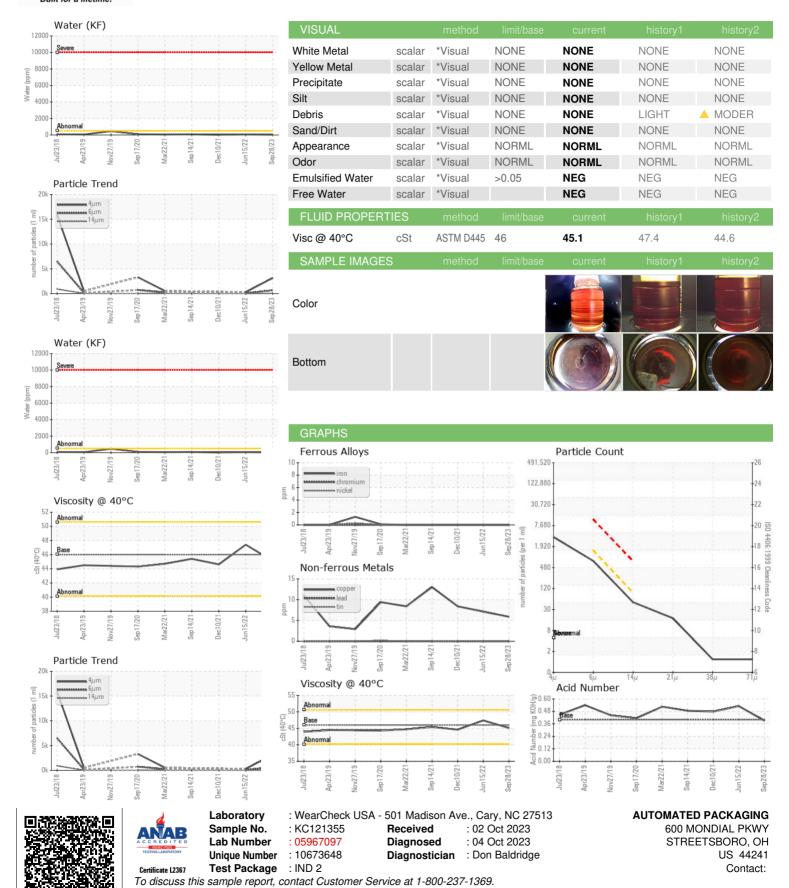
mg KOH/g ASTM D8045 0.4

0.53

0.478



## **OIL ANALYSIS REPORT**



\* - 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)

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