

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

KAESER 1469 - KESSICK WINE CELLARS

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.

Fluid Condition

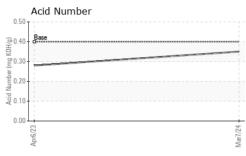
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

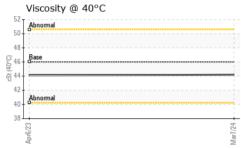
| | | | Apr2023 | Mar2024 | | |
|------------------|----------|-------------|------------|-------------|-------------|----------|
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
| Sample Number | | Client Info | | WC0863686 | WC0795274 | |
| Sample Date | | Client Info | | 07 Mar 2024 | 06 Apr 2023 | |
| Machine Age | hrs | Client Info | | 1901 | 950 | |
| Oil Age | hrs | Client Info | | 1000 | 522 | |
| Oil Changed | | Client Info | | Not Changd | Not Changd | |
| Sample Status | | | | NORMAL | NORMAL | |
| CONTAMINATION | ٧ | method | limit/base | current | history1 | history2 |
| Water | | WC Method | >0.05 | NEG | NEG | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >50 | <1 | <1 | |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 0 | |
| Nickel | ppm | ASTM D5185m | >3 | 0 | 0 | |
| Titanium | ppm | ASTM D5185m | >3 | <1 | 0 | |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | |
| Aluminum | ppm | ASTM D5185m | >10 | 3 | 0 | |
| Lead | ppm | ASTM D5185m | >10 | <1 | 0 | |
| Copper | ppm | ASTM D5185m | >50 | 6 | 0 | |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | |
| Barium | ppm | ASTM D5185m | 90 | 3 | 54 | |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | |
| Magnesium | ppm | ASTM D5185m | 90 | 82 | 75 | |
| Calcium | ppm | ASTM D5185m | 2 | 5 | 2 | |
| Phosphorus | ppm | ASTM D5185m | | 4 | <1 | |
| Zinc | ppm | ASTM D5185m | | 12 | 1 | |
| Sulfur | ppm | ASTM D5185m | | 29402 | 15611 | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 0 | <1 | |
| Sodium | ppm | ASTM D5185m | | 22 | 6 | |
| Potassium | ppm | ASTM D5185m | >20 | 17 | <1 | |
| FLUID DEGRADA | | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | 0.35 | 0.28 | |
| | | | | | | |



OIL ANALYSIS REPORT

VISUAL





| | White Metal | scalar | *Visual | NONE | NONE | NONE | |
|--|--|---|---------------------------|--|-------------|----------|---|
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Precipitate | scalar | *Visual | NONE | NONE | NONE | |
| | Silt | scalar | *Visual | NONE | NONE | NONE | |
| | Debris | scalar | *Visual | NONE | LIGHT | LIGHT | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | |
| Mar7/24 | Appearance | scalar | *Visual | NORML | NORML | NORML | |
| Ma | Odor | scalar | *Visual | NORML | NORML | NORML | |
| | Emulsified Water | scalar | *Visual | >0.05 | NEG | NEG | |
| | Free Water | scalar | *Visual | | NEG | NEG | |
| | FLUID PROPERT | IES | method | limit/base | current | history1 | history2 |
| | Visc @ 40°C | cSt | ASTM D445 | 46 | 44.2 | 44.1 | |
| | SAMPLE IMAGES | \$ | method | limit/base | current | history1 | history2 |
| Mar7/24 | Color | | | | | | no image |
| | Bottom | | | | | | no image |
| | B chromium chromium nickel | | | Mar7/24 | | | |
| | Non-ferrous Metals | 5 | | Mar7/24 | | | |
| | ∝ Viscosity @ 40°C | | | M | Acid Number | | |
| | 55 T | | | | Acid Number | | |
| | 50 - Abnormal | | | 9.0 Acid Number (mg KOH(g) 1.0 Acid Number (mg KOH(g) 0.0 Acid Number (mg KOH(g) | 40 - Base | | |
| | () 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | <u>وَ</u> 0.3 | 30 | | |
| | 40 Abnormal | | | 4 0.2 | 20 - | | |
| | | | | A DO | 10 | | |
| | 35 L + | | | | 3/23 | | 200 |
| | Apr6/23 | | | Mar7/24 | Apr6/23 | | |
| Laboratory Sample No. Lab Number | : WearCheck USA - 501 : WC0863686 : 06125043 : 10939194 | 1 Madison Receiv Tested Diagno | ved : 21 1 : 22 | , NC 27513 Mar 2024 2 Mar 2024 Mar 2024 - Do | | | OLUTIONS - El 2 HUGHES S ITAIN INN, SO US 2964 |

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (864)862-7653