

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

KAESER 8041334

Component Compressor Fluid KAESER SIGMA (OEM) M-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.

| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|------------------|----------|--------------|------------|-------------|----------|----------|
| Sample Number | | Client Info | | KCPA018235 | | |
| Sample Date | | Client Info | | 13 Jun 2024 | | |
| Machine Age | hrs | Client Info | | 6294 | | |
| Oil Age | hrs | Client Info | | 3000 | | |
| Oil Changed | | Client Info | | Changed | | |
| Sample Status | | | | NORMAL | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >50 | 0 | | |
| Chromium | ppm | ASTM D5185m | >10 | <1 | | |
| Nickel | ppm | ASTM D5185m | >3 | 0 | | |
| Titanium | ppm | ASTM D5185m | >3 | <1 | | |
| Silver | ppm | ASTM D5185m | >2 | <1 | | |
| Aluminum | ppm | ASTM D5185m | >10 | 4 | | |
| Lead | ppm | ASTM D5185m | >10 | 0 | | |
| Copper | ppm | | >50 | 8 | | |
| Tin | ppm | ASTM D5185m | >10 | ء <1 | | |
| Vanadium | ppm | ASTM D5185m | | <1 | | |
| Cadmium | ppm | ASTM D5185m | | <1 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | 0 | 0 | | |
| Barium | ppm | ASTM D5185m | 90 | 0 | | |
| Molybdenum | ppm | ASTM D5185m | 0 | <1 | | |
| Manganese | ppm | ASTM D5185m | | 0 | | |
| Magnesium | ppm | ASTM D5185m | 100 | 1 | | |
| Calcium | ppm | ASTM D5185m | 0 | 0 | | |
| Phosphorus | ppm | ASTM D5185m | 0 | 0 | | |
| Zinc | ppm | ASTM D5185m | 0 | 0 | | |
| Sulfur | ppm | ASTM D5185m | 23500 | 16146 | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | >25 | 0 | | |
| Sodium | ppm | ASTM D5185m | | 0 | | |
| Potassium | ppm | ASTM D5185m | >20 | 1 | | |
| Water | % | ASTM D6304 | >0.05 | 0.010 | | |
| ppm Water | ppm | ASTM D6304 | >500 | 102 | | |
| FLUID CLEANLIN | IESS | method | limit/base | current | history1 | history2 |
| Particles >4µm | | ASTM D7647 | | 1343 | | |
| Particles >6µm | | ASTM D7647 | >1300 | 504 | | |
| Particles >14µm | | ASTM D7647 | >80 | 10 | | |
| Particles >21µm | | ASTM D7647 | >20 | 1 | | |
| Particles >38µm | | ASTM D7647 | >4 | 0 | | |
| Particles >71µm | | ASTM D7647 | >3 | 0 | | |
| Oil Cleanliness | | ISO 4406 (c) | >/17/13 | 18/16/10 | | |
| FLUID DEGRADA | | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.0 | 0.39 | | |



OIL ANALYSIS REPORT

| Water (KF) | VISUAL | | method | limit/base | current | history1 | history2 |
|--|---|--|---|--|------------------|------------------|---|
| 10000 - Severe | White Metal | scalar | *Visual | NONE | NONE | | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | | |
| e 000 | Precipitate | scalar | *Visual | NONE | NONE | | |
| an e soos 4000 | Silt | scalar | *Visual | NONE | NONE | | |
| 2000 - | Debris | scalar | *Visual | NONE | NONE | | |
| Abnormal | Sand/Dirt | scalar | *Visual | NONE | NONE | | |
| 3/24 | | scalar | *Visual | NORML | NORML | | |
| Jun 13/24 | Appearance Odor | scalar | *Visual | NORML | NORML | | |
| Deutriele Tueud | Emulsified Water | r scalar | *Visual | >0.05 | NEG | | |
| Particle Trend | Free Water | scalar | *Visual | | NEG | | |
| $\widehat{\overline{E}}^{1k}$ = $\frac{4\mu m}{6\mu m}$ | FLUID PROPE | ERTIES | method | limit/base | current | history1 | history2 |
| 1 1k+ approx 14μm 10 1k+ 10 1k+ | Visc @ 40°C | cSt | ASTM D445 | 45 | 44.5 | | |
| ф 1k - b 1k - | SAMPLE IMAG | GES | method | limit/base | current | history1 | history2 |
| 2 _{0k} | | | | | | | |
| Jun13/24 | Color | | | | | no image | no image |
| Water (KF) | Bottom | | | | | no image | no image |
| 6000 | GRAPHS | | | | | | |
| 4000- | Ferrous Alloys | | | | Particle Count | | |
| 2000 - | 10 T | | | 491,520 | I | | T ²⁶ |
| Abnormal | 8 - Iron | | | 122,880 | - | | +24 |
| Jun 13/24 | E 6 | | | | : | | |
| h | 4 | | | 30,720 | - | | -22 |
| Viscosity @ 40°C | | | | 7,680 | · · | | 20 |
| 60 T | Jun 13/24 | | | 3/24 | N. | | -20 ISO 4406-1999 Cleanfiness C |
| 55 - Severe | Jun J | | | Jun 13/24- 1'66 (per 1 ml) 88 | × · · | | -10 06 19 |
| G 50 Abnormal | Non-ferrous Me | etals | | :12 480 | | | -16 Ce |
| (2) 50 - 0 (2) - 0 (3) - 0 (4) - 0 (5) - 0 | | | | jo jo ja 120 | | | 114 0 |
| Abnormal | 8 - Internet lead | | | quint | | N | 12 00 |
| 40 - J Severe | | | | 30 | | \ | -12 0 |
| 35 | 2 | | | | Sever mal | | 10 |
| Jun 13/24 | | | | | | | |
| | יי Jun13/24 | | | Jun 13/24 | • | | -8 |
| Particle Trend | | | | nnr (| ALL BU | 14μ 21μ | 38µ 71µ |
| 1k 4µm | Viscosity @ 40 | °C | | | Acid Number | 1114 2114 | 30µ 11µ |
| Image: Constraint of the second sec | 55 Severe | | | () 0.96 0.96 | Basermal | | |
| 19 1k | | | | Q 0.96 | | | |
| та та 1k | G 50 - Abnormal 60 - 50 - Base 8 45 - Abnormal | | | | | | |
| | 40- | | | 0.48 M Picore V 0.00 | | | |
| e _{ok} | 35 Severe | | | | | | |
| 0k | haret. | | | Jun 13/24 | Jun 13/24 | | Jun13/24 |
| Jun 13/2 [,] | î nul | | | Junl | լոսլ | | լոոլ |
| Certificate L2367 Te To discuss this sa | aboratory : WearCheck USA - ample No. : KCPA018235 ab Number : 06240350 nique Number : 11129184 est Package : IND 2 (Additional ample report, contact Customer S nethods that are outside of the ISO | Rece Teste Diagr Tests: KF, F Service at 1-8 | ived : 18 ed : 19 nosed : 19 PrtCount) 800-237-136 | 3 Jul 2024 9 Jul 2024 9 Jul 2024 - Doi 9. | ug Bogart | 6733 CONSO S/ | D-YOUNG CO LIDATED WAY AN DIEGO, CA US 92121 ervice Manager T: |
| | nformity to specifications are base | | | | rule (JCGM 106 | :2012) | F: |

Contact/Location: Service Manager - CEDSANCAL