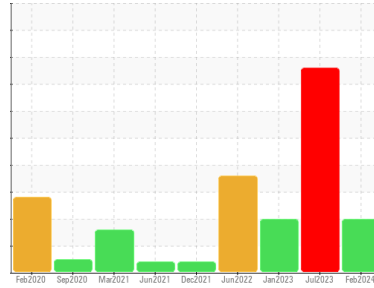




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
KAESER SM 15 6879966 (S/N 1106)

Component
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.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | KC06122324 | KC05909489 | KC05741513 |
| Sample Date | Client Info | 14 Feb 2024 | 21 Jul 2023 | 05 Jan 2023 |
| Machine Age | hrs | 34544 | 30529 | 25902 |
| Oil Age | hrs | 0 | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | ABNORMAL | SEVERE | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|----------|----------|----|
| Iron | ppm | ASTM D5185m >50 | 0 | ▲ 30 | 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 | 0 |
| Aluminum | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >50 | 7 | 14 | 14 |
| Tin | ppm | ASTM D5185m >10 | 0 | 0 | 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 | 0 | 0 |
| 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 | 0 | <1 | <1 |
| Calcium | ppm | ASTM D5185m 2 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | 0 | 1 | 19 |
| Zinc | ppm | ASTM D5185m | 0 | 0 | 0 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >25 | 0 | <1 | 7 |
| Sodium | ppm | ASTM D5185m | 0 | <1 | 2 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 2 | 0 |
| Water | % | ASTM D6304 >0.05 | 0.001 | ▲ 0.097 | 0.016 |
| ppm Water | ppm | ASTM D6304 >500 | 13 | ▲ 970 | 168.6 |

FLUID CLEANLINESS

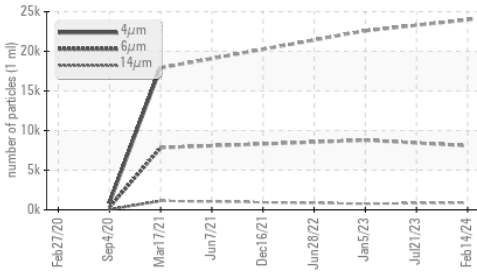
| method | limit/base | current | history1 | history2 |
|-----------------|---------------------|----------------|----------|----------|
| Particles >4µm | ASTM D7647 | 23981 | --- | 22598 |
| Particles >6µm | ASTM D7647 >1300 | ▲ 8095 | --- | ▲ 8786 |
| Particles >14µm | ASTM D7647 >80 | ▲ 895 | --- | ▲ 762 |
| Particles >21µm | ASTM D7647 >20 | ▲ 266 | --- | ▲ 177 |
| Particles >38µm | ASTM D7647 >4 | ▲ 10 | --- | ▲ 16 |
| Particles >71µm | ASTM D7647 >3 | 0 | --- | 1 |
| Oil Cleanliness | ISO 4406 (c) >17/13 | ▲ 20/17 | --- | ▲ 20/17 |

FLUID DEGRADATION

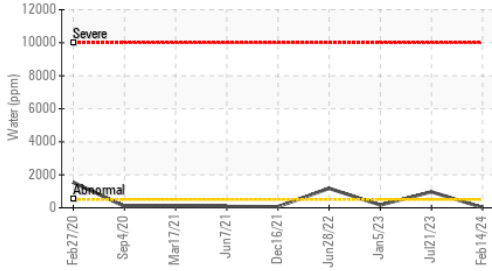
| method | limit/base | current | history1 | history2 | |
|------------------|------------|----------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | 0.37 | 0.33 | 0.30 |

OIL ANALYSIS REPORT

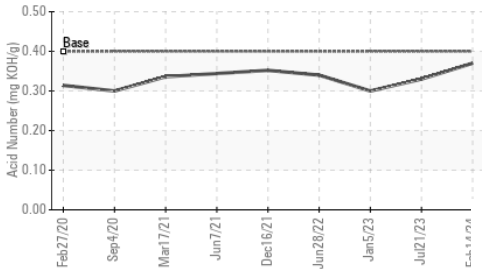
▲ Particle Trend



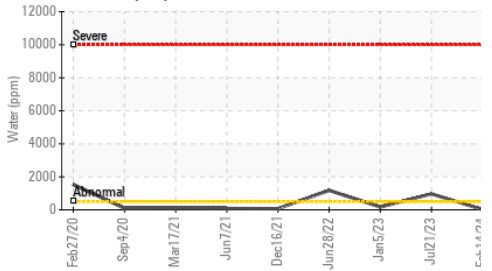
Water (KF)



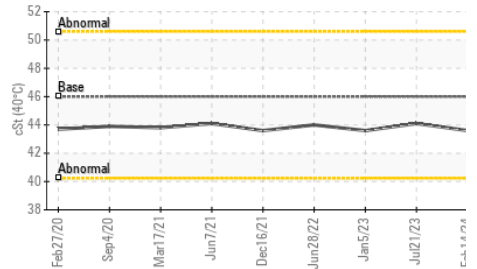
Acid Number



Water (KF)



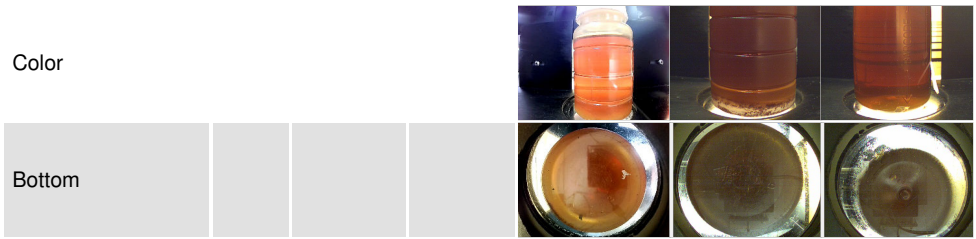
Viscosity @ 40°C



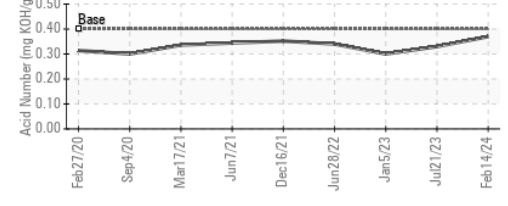
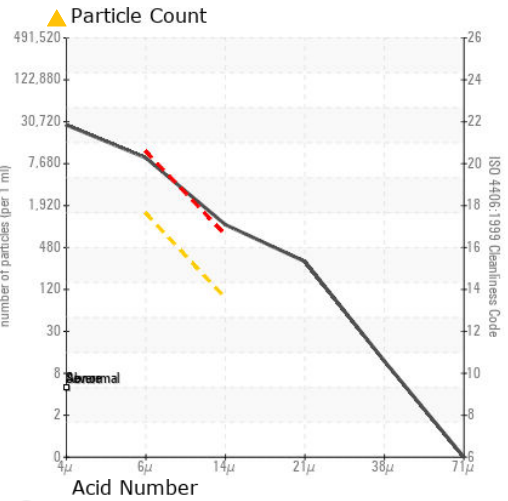
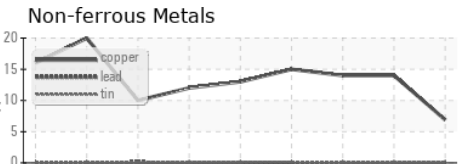
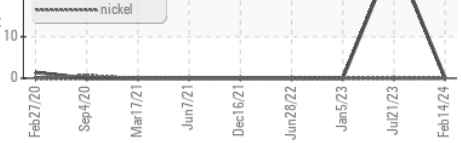
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | LIGHT | ▲ MODER |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | 0.2% |
| Free Water | scalar | *Visual | | NEG | ▲ >10% |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|-------------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46 | 43.6 | 44.1 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC06122324
Lab Number : 06122324
Unique Number : 10936475
Test Package : IND 2
Received : 19 Mar 2024
Tested : 20 Mar 2024
Diagnosed : 21 Mar 2024 - Don Baldrige

OSBORNE WOOD PRODUCTS
 4618 HWY 123 NORTH
 TOCCOA, GA
 US 30577
 Contact:

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - 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)

T:
F: