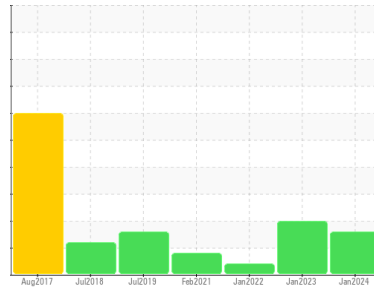




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
KAESER AIRCENTER SK 15 4258682 (S/N 1128)

Component
Compressor

Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

Recommendation

There is too much water present in this sample to perform a particle count. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | KCPA011019 | KCP55744 | KCP43819 |
| Sample Date | Client Info | | 26 Jan 2024 | 23 Jan 2023 | 10 Jan 2022 |
| Machine Age | hrs | Client Info | 27756 | 25440 | 23117 |
| Oil Age | hrs | Client Info | 0 | 0 | 2146 |
| Oil Changed | Client Info | | N/A | Changed | Changed |
| Sample Status | | | ABNORMAL | ABNORMAL | ATTENTION |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >50 | 0 | 0 | <1 |
| Chromium | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >3 | 2 | 0 | 0 |
| Titanium | ppm | ASTM D5185m >3 | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >10 | <1 | 4 | <1 |
| Lead | ppm | ASTM D5185m >10 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m >50 | 6 | 2 | 3 |
| Tin | ppm | ASTM D5185m >10 | <1 | <1 | <1 |
| Antimony | ppm | ASTM D5185m | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m 90 | 29 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 0 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m 100 | 57 | 65 | 55 |
| Calcium | ppm | ASTM D5185m 0 | 0 | 5 | <1 |
| Phosphorus | ppm | ASTM D5185m 0 | 4 | 4 | 2 |
| Zinc | ppm | ASTM D5185m 0 | 6 | 0 | 9 |
| Sulfur | ppm | ASTM D5185m 23500 | 18250 | 21590 | 18740 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|----------------|----------|----------|
| Silicon | ppm | ASTM D5185m >25 | <1 | <1 | <1 |
| Sodium | ppm | ASTM D5185m | 5 | 19 | 19 |
| Potassium | ppm | ASTM D5185m >20 | 2 | 2 | 0 |
| Water | % | ASTM D6304 >0.05 | ▲ 0.430 | 0.015 | 0.011 |
| ppm Water | ppm | ASTM D6304 >500 | ▲ 4300 | 156.2 | 117.0 |

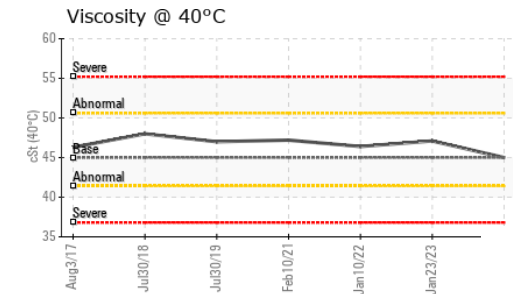
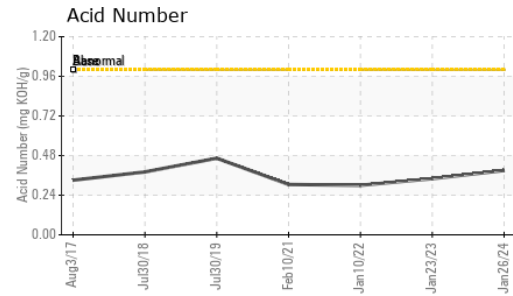
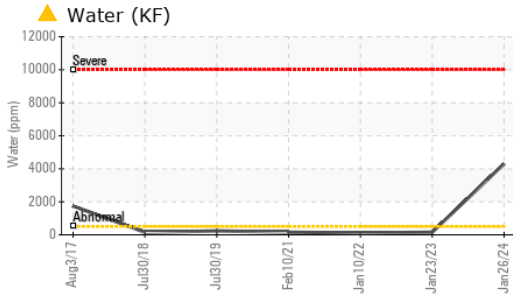
FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|------------------------|------------|------------|------------|----------|
| Particles >4µm | ASTM D7647 | | --- | 14460 | 1521 |
| Particles >6µm | ASTM D7647 >1300 | | --- | ▲ 4847 | 539 |
| Particles >14µm | ASTM D7647 >80 | | --- | ▲ 564 | ▲ 84 |
| Particles >21µm | ASTM D7647 >20 | | --- | ▲ 138 | 26 |
| Particles >38µm | ASTM D7647 >4 | | --- | ▲ 13 | 1 |
| Particles >71µm | ASTM D7647 >3 | | --- | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | | --- | ▲ 21/19/16 | ▲ 16/14 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 1.0 | 0.39 | 0.34 | 0.30 |

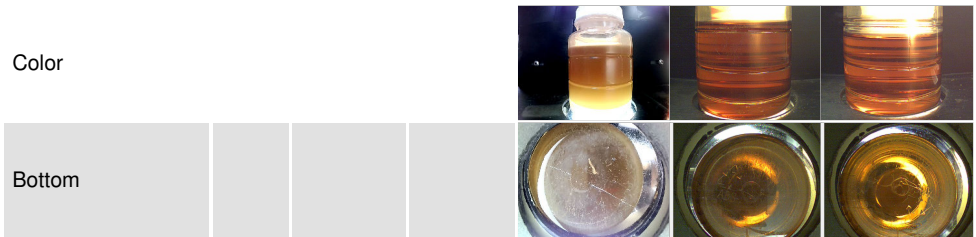
OIL ANALYSIS REPORT



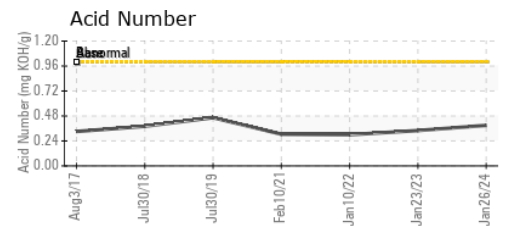
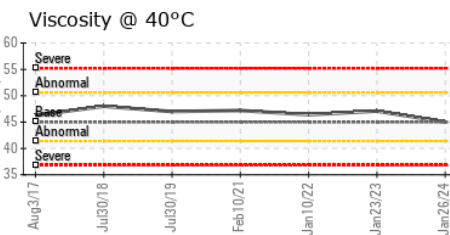
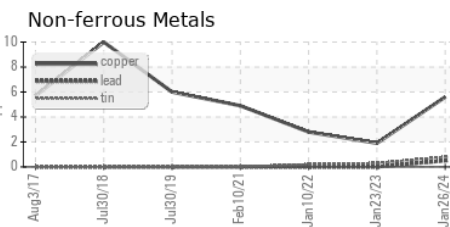
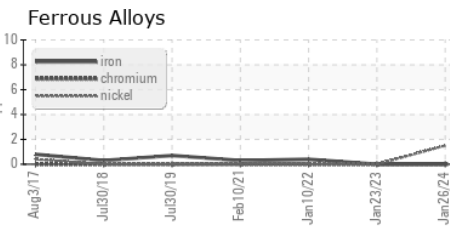
| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal | scalar | *Visual | NONE | NONE | NONE | |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | |
| Silt | scalar | *Visual | NONE | NONE | NONE | |
| Debris | scalar | *Visual | NONE | NONE | NONE | |
| 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 | ▲ 0.2% | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 45 | 45.0 | 47.1 | 46.4 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA011019 **Received** : 01 Feb 2024
Lab Number : 06076873 **Diagnosed** : 02 Feb 2024
Unique Number : 10858964 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

CREE VISUAL MARKETING CO
 1200 CROWLEY DR
 CARROLLTON, TX
 US 75006
 Contact: Service Manager

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: