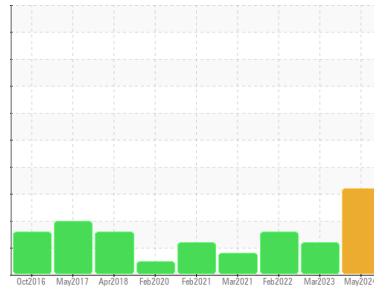




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
KAESER SX 5 5259665 (S/N 1364)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a light concentration of water present in the oil. High concentration of visible dirt/debris 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 | KCPA017323 | KCPA001134 | KCP38208 |
| Sample Date | Client Info | 01 May 2024 | 23 Mar 2023 | 08 Feb 2022 |
| Machine Age | hrs | Client Info | 22662 | 18422 |
| Oil Age | hrs | Client Info | 4000 | 0 |
| Oil Changed | Client Info | Changed | N/A | Changed |
| Sample Status | | ABNORMAL | ATTENTION | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|----------|----------|----|
| Iron | ppm | ASTM D5185m >50 | <1 | <1 | 2 |
| 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 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m >10 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >50 | 8 | 4 | 6 |
| Tin | ppm | ASTM D5185m >10 | <1 | 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 | 0 | <1 |
| Barium | ppm | ASTM D5185m 90 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m 90 | 29 | 28 | 26 |
| Calcium | ppm | ASTM D5185m 2 | 1 | <1 | <1 |
| Phosphorus | ppm | ASTM D5185m | 5 | 24 | 27 |
| Zinc | ppm | ASTM D5185m | 14 | 25 | 50 |
| Sulfur | ppm | ASTM D5185m | 21489 | 21461 | 19350 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|----------|----------|-------|
| Silicon | ppm | ASTM D5185m >25 | <1 | 2 | 1 |
| Sodium | ppm | ASTM D5185m | 7 | 13 | 16 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 1 | 3 |
| Water | % | ASTM D6304 >0.05 | ▲ 0.195 | 0.017 | 0.008 |
| ppm Water | ppm | ASTM D6304 >500 | ▲ 1950 | 170.9 | 83.3 |

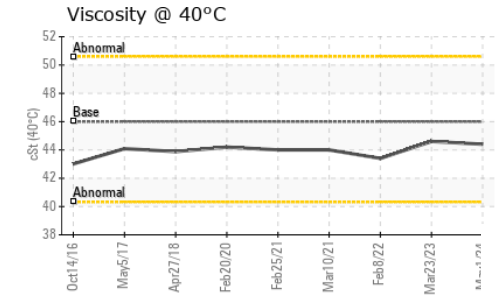
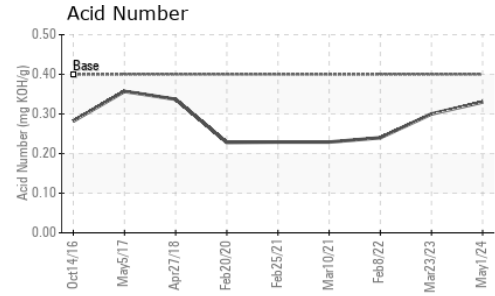
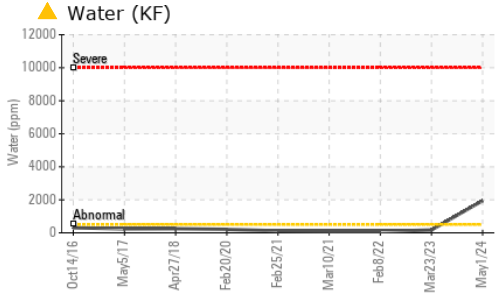
FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|---------|------------|----------|
| Particles >4µm | ASTM D7647 | --- | 2614 | 43441 |
| Particles >6µm | ASTM D7647 >1300 | --- | 955 | ▲ 13836 |
| Particles >14µm | ASTM D7647 >80 | --- | ● 104 | ▲ 1467 |
| Particles >21µm | ASTM D7647 >20 | --- | ● 28 | ▲ 366 |
| Particles >38µm | ASTM D7647 >4 | --- | 2 | ▲ 30 |
| Particles >71µm | ASTM D7647 >3 | --- | 0 | 2 |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | --- | ● 19/17/14 | ▲ 21/18 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|----------------|----------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | 0.33 | 0.30 | 0.24 |

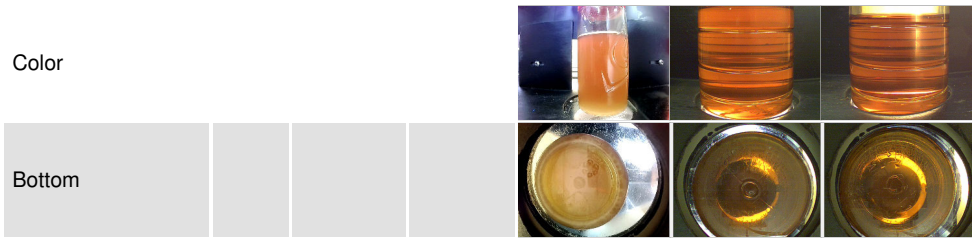
OIL ANALYSIS REPORT



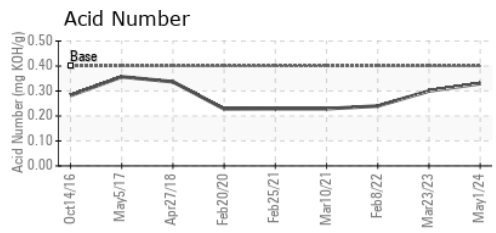
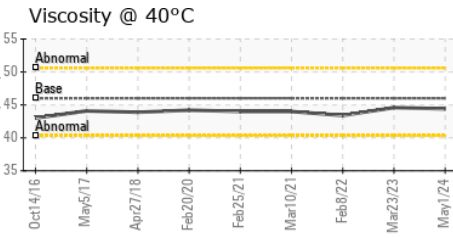
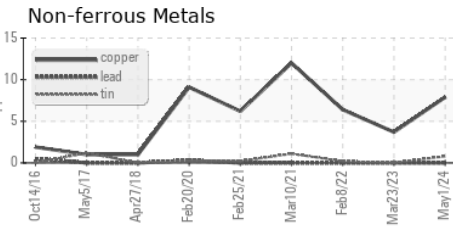
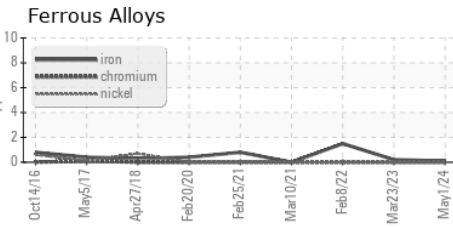
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE |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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46 | 44.4 | 44.6 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA017323
Lab Number : 06177119
Unique Number : 11023172
Test Package : IND 2 (Additional Tests: KF, PrtCount)
Received : 13 May 2024
Tested : 16 May 2024
Diagnosed : 16 May 2024 - Angela Borella

OFFICE DEPOT DIST CENTER
 735 E TRINITY BLVD
 GRAND PRAIRIE, TX
 US 75050
 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: