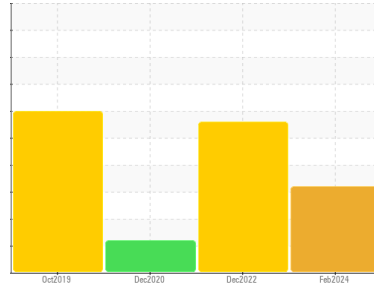




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
KAESER SX 5 6222783 (S/N 1025)

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 light concentration of water present in the oil. Excessive free water present.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | KCPA011577 | KCP48158D | KCP27420 |
| Sample Date | Client Info | 12 Feb 2024 | 07 Dec 2022 | 04 Dec 2020 |
| Machine Age | hrs | 5932 | 3963 | 1961 |
| Oil Age | hrs | 0 | 1997 | 1178 |
| Oil Changed | Client Info | N/A | Changed | Not Changd |
| Sample Status | | ABNORMAL | ABNORMAL | ATTENTION |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|------------|----------|----|
| Iron | ppm | ASTM D5185m >50 | 0 | 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 | 0 |
| Aluminum | ppm | ASTM D5185m >10 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m >10 | 0 | 4 | 4 |
| Copper | ppm | ASTM D5185m >50 | 5 | 13 | 2 |
| Tin | ppm | ASTM D5185m >10 | 0 | <1 | 0 |
| Antimony | ppm | ASTM D5185m | --- | --- | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | <1 |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|-------------------|--------------|----------|-------|
| Boron | ppm | ASTM D5185m 0 | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185m 90 | <1 | <1 | 33 |
| Molybdenum | ppm | ASTM D5185m 0 | 0 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 100 | 15 | 8 | 30 |
| Calcium | ppm | ASTM D5185m 0 | 0 | 2 | 7 |
| Phosphorus | ppm | ASTM D5185m 0 | 0 | 16 | 18 |
| Zinc | ppm | ASTM D5185m 0 | 60 | 79 | 55 |
| Sulfur | ppm | ASTM D5185m 23500 | 16485 | 22611 | 17649 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|----------------|----------|-------|
| Silicon | ppm | ASTM D5185m >25 | <1 | 3 | 2 |
| Sodium | ppm | ASTM D5185m | 17 | 14 | 41 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 2 | 0 |
| Water | % | ASTM D6304 >0.05 | ▲ 0.160 | ▲ 0.195 | 0.009 |
| ppm Water | ppm | ASTM D6304 >500 | ▲ 1600 | ▲ 1950 | 96.6 |

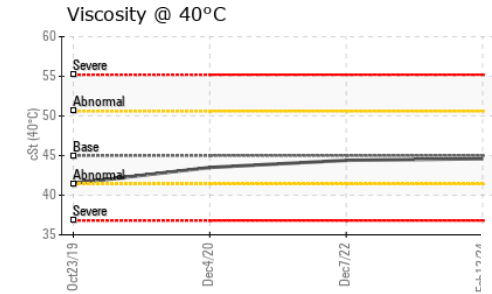
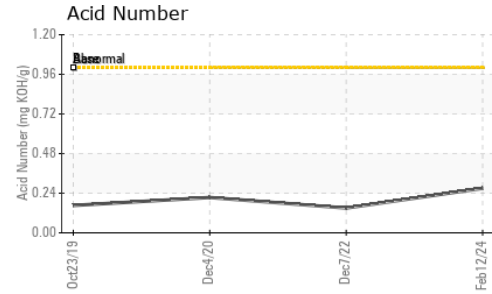
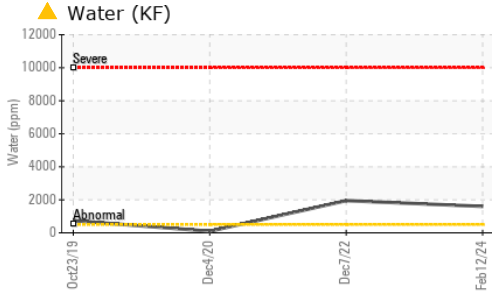
FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|------------|------------|----------|
| Particles >4µm | ASTM D7647 | --- | 1244 | 6854 |
| Particles >6µm | ASTM D7647 >1300 | --- | 678 | 2220 |
| Particles >14µm | ASTM D7647 >80 | --- | ● 115 | ● 132 |
| Particles >21µm | ASTM D7647 >20 | --- | ● 39 | ● 25 |
| Particles >38µm | ASTM D7647 >4 | --- | ● 6 | 2 |
| Particles >71µm | ASTM D7647 >3 | --- | 1 | 0 |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | --- | ● 17/17/14 | ● 18/14 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|----------------|-------------|----------|-------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 1.0 | 0.27 | 0.15 | 0.214 |

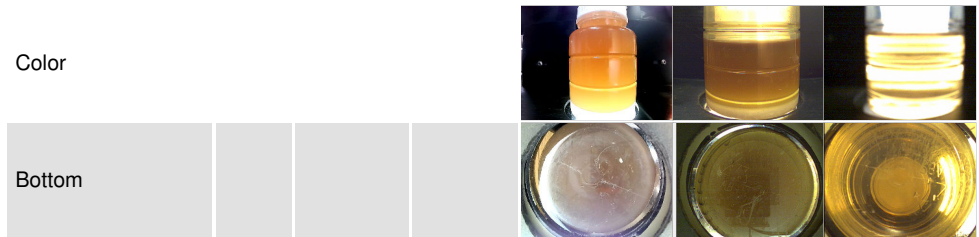
OIL ANALYSIS REPORT



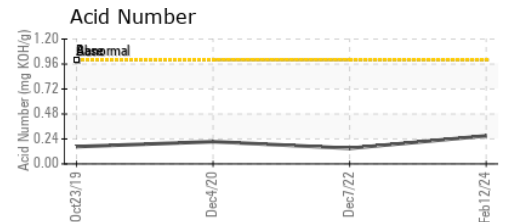
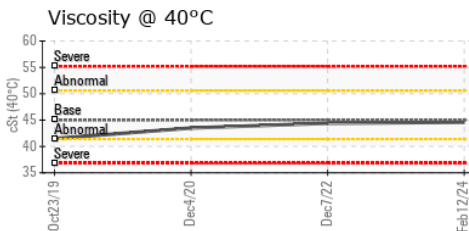
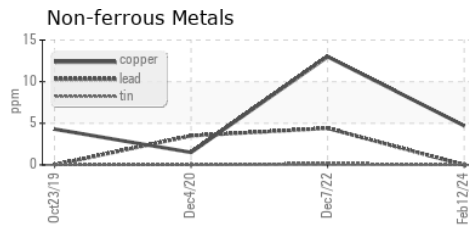
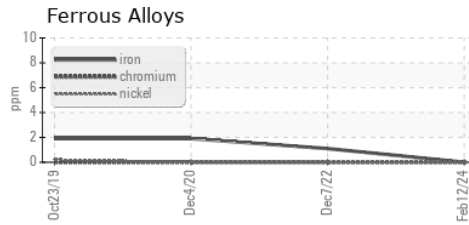
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | VLITE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | HAZY |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | ▲ 0.2% | ▲ 0.2% |
| Free Water | scalar | *Visual | | ▲ >10% | ▲ 1.0 |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 45 | 44.6 | 44.4 | 43.5 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA011577 **Received** : 26 Feb 2024
Lab Number : 06100161 **Tested** : 28 Feb 2024
Unique Number : 10898391 **Diagnosed** : 28 Feb 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

SYMBOTIC LLC
 200 RESEARCH DR
 WILMINGTON, MA
 US 01887
 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: