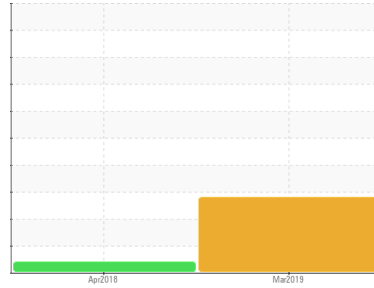




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
KAESER SFC 37T 5673724 (S/N 1061)

Component
Compressor

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

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a moderate amount of particulates present in the oil. There is a trace of moisture present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info | KC77808 | KC63247 | --- |
| Sample Date | Client Info | 05 Mar 2019 | 23 Apr 2018 | --- |
| Machine Age | hrs | 6105 | 1183 | --- |
| Oil Age | hrs | 4922 | 1200 | --- |
| Oil Changed | Client Info | Changed | Changed | --- |
| Sample Status | | ABNORMAL | ABNORMAL | --- |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|-----|
| Iron | ppm | ASTM D5185m >50 | <1 | <1 | --- |
| Chromium | ppm | ASTM D5185m >10 | 0 | 0 | --- |
| Nickel | ppm | ASTM D5185m >3 | <1 | 0 | --- |
| Titanium | ppm | ASTM D5185m >3 | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m >2 | <1 | 0 | --- |
| Aluminum | ppm | ASTM D5185m >10 | <1 | <1 | --- |
| Lead | ppm | ASTM D5185m >10 | <1 | 0 | --- |
| Copper | ppm | ASTM D5185m >50 | 7 | 4 | --- |
| Tin | ppm | ASTM D5185m >10 | 0 | <1 | --- |
| Antimony | ppm | ASTM D5185m | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | --- |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|----------------|-----------|----------|-----|
| Boron | ppm | ASTM D5185m | 3 | 0 | --- |
| Barium | ppm | ASTM D5185m 90 | 0 | <1 | --- |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | --- |
| Manganese | ppm | ASTM D5185m | 1 | 0 | --- |
| Magnesium | ppm | ASTM D5185m 90 | 0 | 2 | --- |
| Calcium | ppm | ASTM D5185m 2 | 0 | 0 | --- |
| Phosphorus | ppm | ASTM D5185m | 63 | 38 | --- |
| Zinc | ppm | ASTM D5185m | 24 | 16 | --- |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|----------------|----------|-----|
| Silicon | ppm | ASTM D5185m >25 | 5 | <1 | --- |
| Sodium | ppm | ASTM D5185m | 4 | <1 | --- |
| Potassium | ppm | ASTM D5185m >20 | 6 | 0 | --- |
| Water | % | ASTM D6304 >0.05 | ▲ 0.056 | 0.004 | --- |
| ppm Water | ppm | ASTM D6304 >500 | ▲ 560 | 40 | --- |

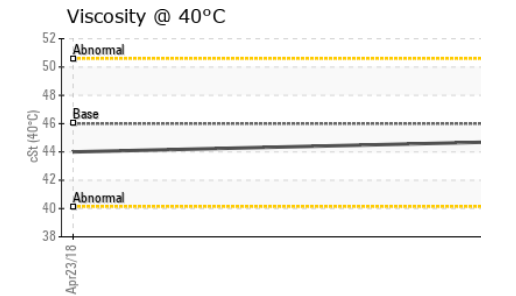
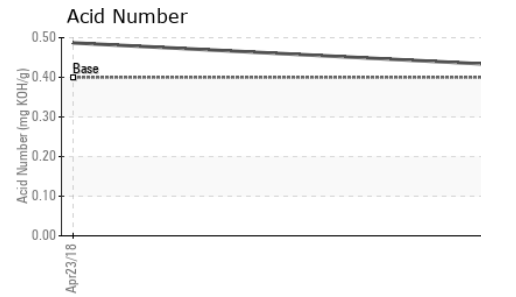
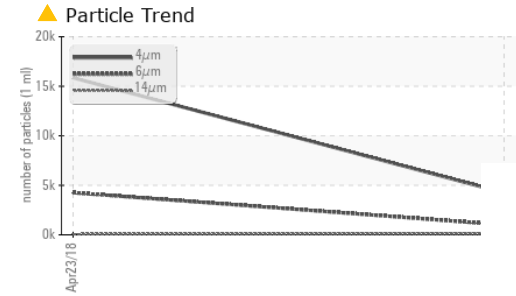
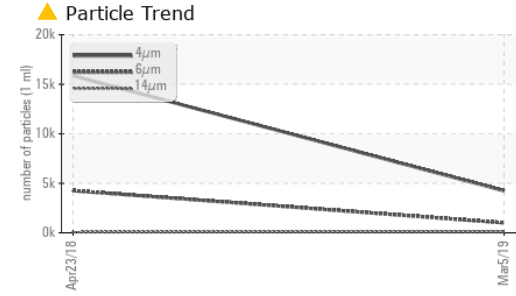
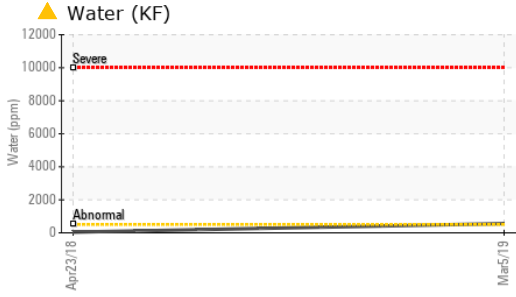
FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|----------------|----------|----------|
| Particles >4µm | ASTM D7647 | 4240 | 15855 | --- |
| Particles >6µm | ASTM D7647 >1300 | 1010 | ▲ 4254 | --- |
| Particles >14µm | ASTM D7647 >80 | ▲ 107 | 58 | --- |
| Particles >21µm | ASTM D7647 >20 | ▲ 44 | 13 | --- |
| Particles >38µm | ASTM D7647 >4 | ▲ 6 | 2 | --- |
| Particles >71µm | ASTM D7647 >3 | 0 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | ▲ 17/14 | ▲ 19/13 | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|----------------|--------------|----------|-----|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | 0.431 | 0.487 | --- |

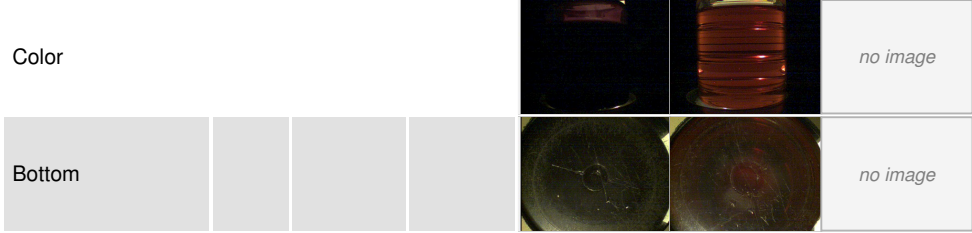
OIL ANALYSIS REPORT



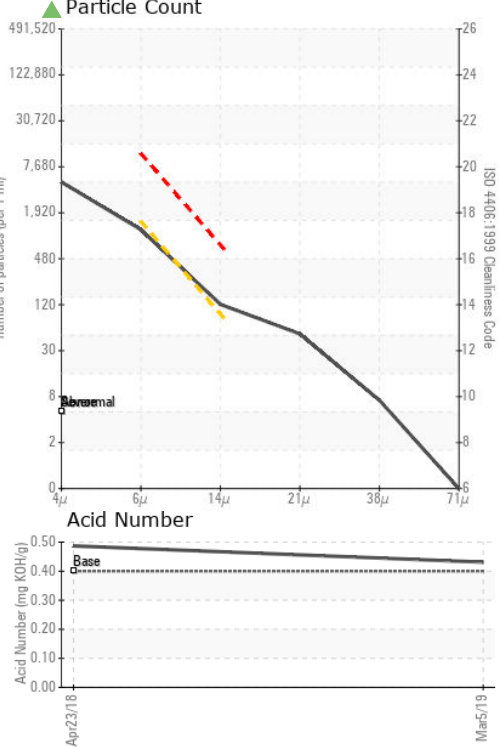
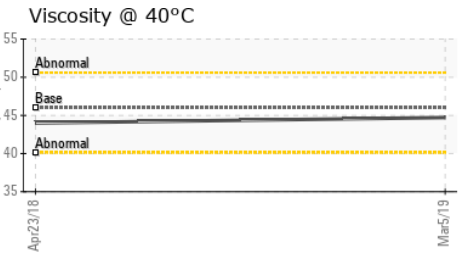
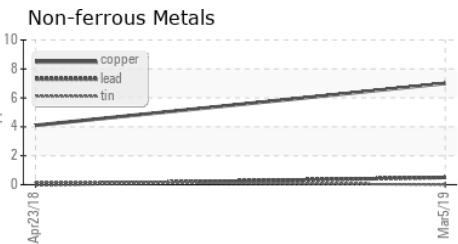
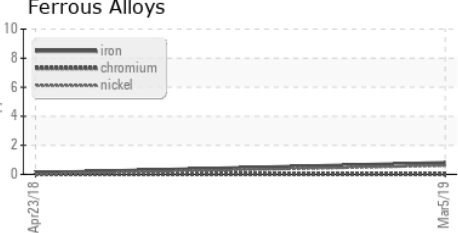
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | VLITE | VLITE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | 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 |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46 | 44.72 | 44.00 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC77808 **Received** : 11 Mar 2019
Lab Number : 04667508 **Diagnosed** : 12 Mar 2019
Unique Number : 8524014 **Diagnostician** : Don Baldrige
Test Package : IND 2

LAUREN AGRIS SYSTEMS - COOPER STANDARD
 2162 REISER AVE SE
 NEW PHILADELPHIA, OH
 US 44663
 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)