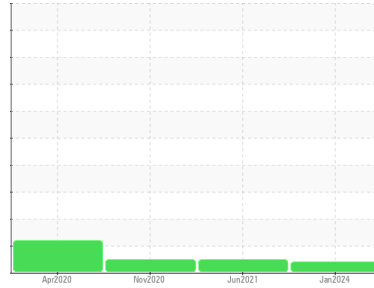




OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Machine Id
6866616 (S/N 1359)

Component
Compressor

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

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

Contamination

Moderate 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 suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | KC95734 | KC99961 | KC93433 |
| Sample Date | Client Info | | | 04 Jan 2024 | 24 Jun 2021 | 25 Nov 2020 |
| Machine Age | hrs | Client Info | | 33139 | 17342 | 12749 |
| Oil Age | hrs | Client Info | | 0 | 0 | 5305 |
| Oil Changed | Client Info | | | Not Chngd | Changed | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|------------|----------|----------|
| Iron | ppm | ASTM D5185m | >50 | 0 | 0 | 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 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 2 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | 12 | 17 | 15 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185m | | --- | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

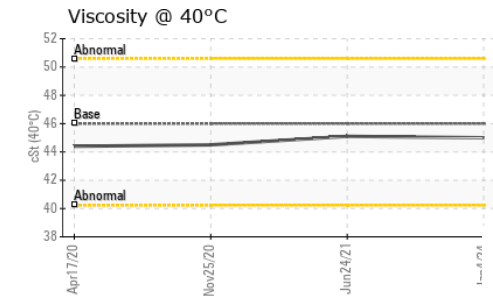
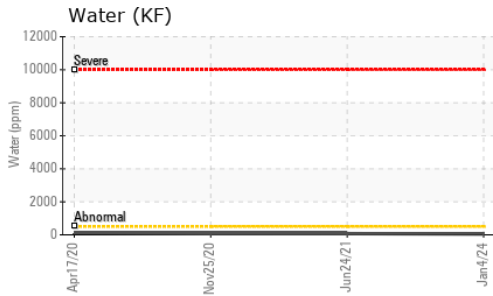
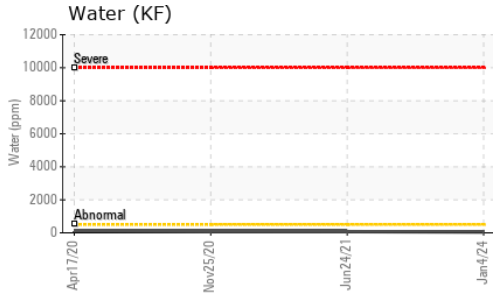
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|----------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | 8 |
| Barium | ppm | ASTM D5185m | 90 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 90 | 0 | 0 | 12 |
| Calcium | ppm | ASTM D5185m | 2 | 0 | 0 | 4 |
| Phosphorus | ppm | ASTM D5185m | | 0 | 8 | 3 |
| Zinc | ppm | ASTM D5185m | | 9 | 0 | 18 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >25 | 0 | 0 | 0 |
| Sodium | ppm | ASTM D5185m | | 2 | 0 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | 1 |
| Water | % | ASTM D6304 | >0.05 | 0.004 | 0.007 | 0.008 |
| ppm Water | ppm | ASTM D6304 | >500 | 47 | 73.4 | 84.8 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|------------|----------|----------|
| Particles >4µm | | ASTM D7647 | | --- | 964 | 542 |
| Particles >6µm | | ASTM D7647 | >1300 | --- | 273 | 155 |
| Particles >14µm | | ASTM D7647 | >80 | --- | 19 | 15 |
| Particles >21µm | | ASTM D7647 | >20 | --- | 7 | 5 |
| Particles >38µm | | ASTM D7647 | >4 | --- | 0 | 2 |
| Particles >71µm | | ASTM D7647 | >3 | --- | 0 | 1 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | --- | 15/11 | 14/11 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.4 | 0.34 | 0.275 | 0.204 |

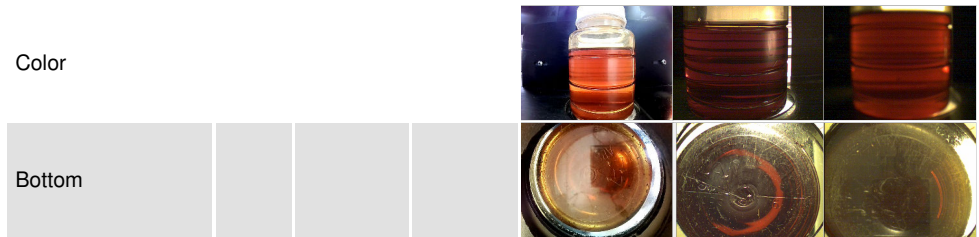
OIL ANALYSIS REPORT



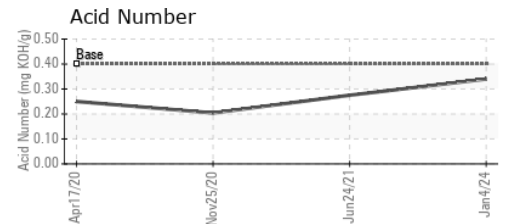
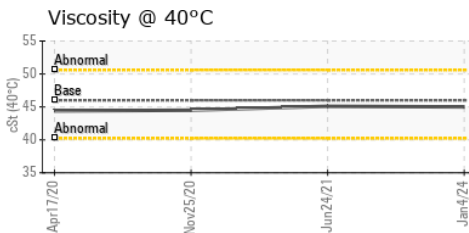
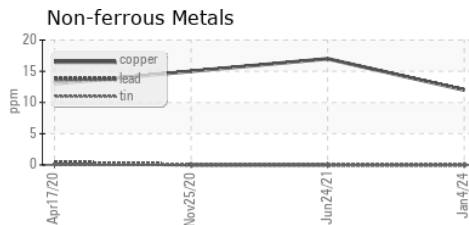
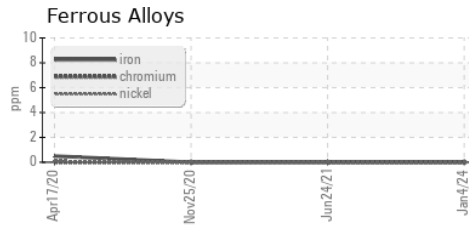
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE |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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 46 | 45.0 | 45.1 | 44.5 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KC95734
Lab Number : 06122339
Unique Number : 10936490
Test Package : IND 2
Received : 19 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Don Baldrige

MACKNIGHT SMOKED FOODS
 550 NE 185TH ST
 MIAMI, FL
 US 33169
 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: