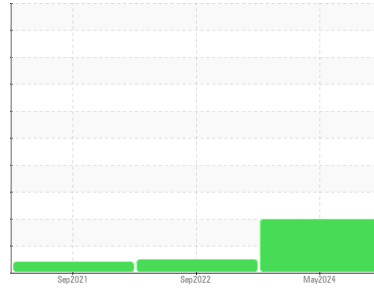




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

KAESER 6588143

Component

Compressor

Fluid

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates 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 | | | KCPA017943 | KCP37356 | KCP36930 |
| Sample Date | Client Info | | | 23 May 2024 | 06 Sep 2022 | 06 Sep 2021 |
| Machine Age | hrs | Client Info | | 35361 | 24353 | 16068 |
| Oil Age | hrs | Client Info | | 4069 | 6000 | 2000 |
| Oil Changed | Client Info | | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >50 | 0 | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 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 | 3 | <1 | 1 |
| Lead | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | 6 | 6 | 9 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| 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 | 0 | <1 |
| Barium | ppm | ASTM D5185m | 90 | 0 | 1 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 100 | 1 | 0 | 3 |
| Calcium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | 0 | 0 | 22 | 83 |
| Zinc | ppm | ASTM D5185m | 0 | 12 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 23500 | 22506 | 16299 | 13194 |

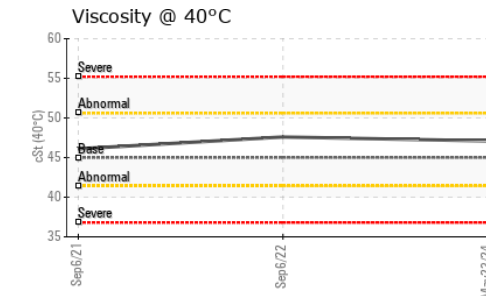
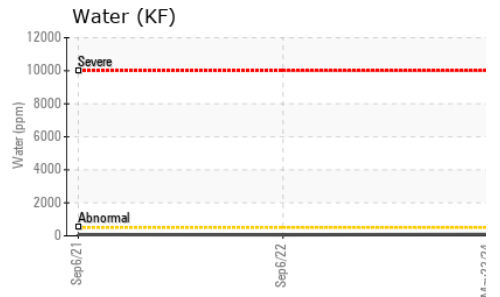
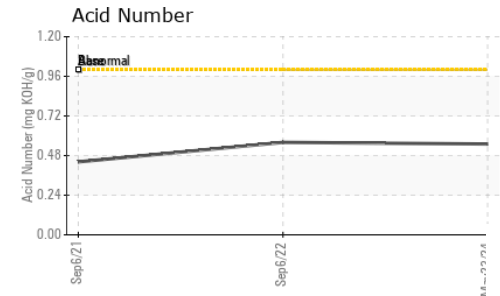
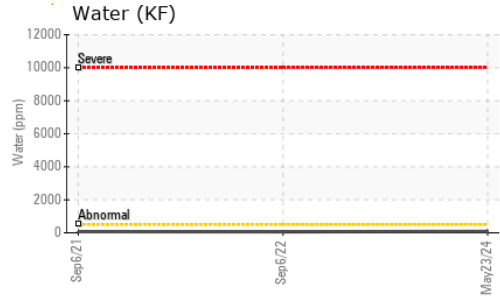
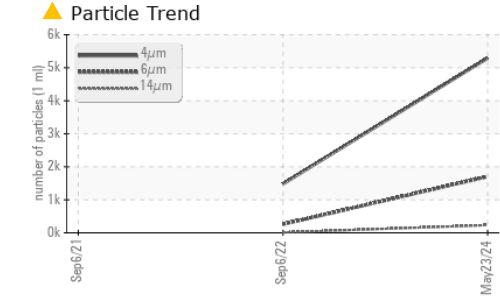
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >25 | <1 | <1 | 3 |
| Sodium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | <1 |
| Water | % | ASTM D6304 | >0.05 | 0.008 | 0.006 | 0.007 |
| ppm Water | ppm | ASTM D6304 | >500 | 85 | 64.6 | 72.4 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-------------------|----------|----------|
| Particles >4µm | | ASTM D7647 | | 5293 | 1484 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ 1706 | 260 | --- |
| Particles >14µm | | ASTM D7647 | >80 | ▲ 234 | 11 | --- |
| Particles >21µm | | ASTM D7647 | >20 | ▲ 81 | 3 | --- |
| Particles >38µm | | ASTM D7647 | >4 | ▲ 5 | 0 | --- |
| Particles >71µm | | ASTM D7647 | >3 | 1 | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/13 | ▲ 20/18/15 | 18/15/11 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------|------------|---------|----------|----------|
|-------------------|--|--------|------------|---------|----------|----------|

Acid Number (AN) mg KOH/g ASTM D8045 1.0 **0.55** 0.56 0.442

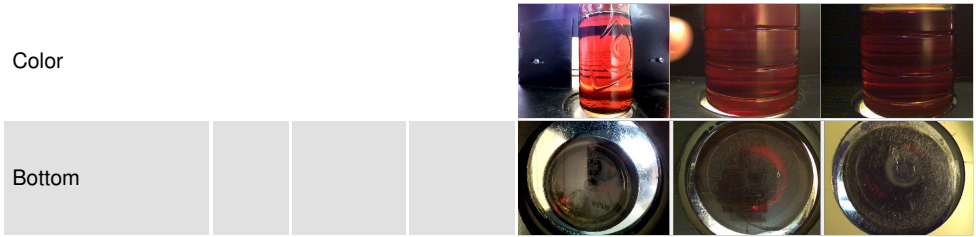
OIL ANALYSIS REPORT



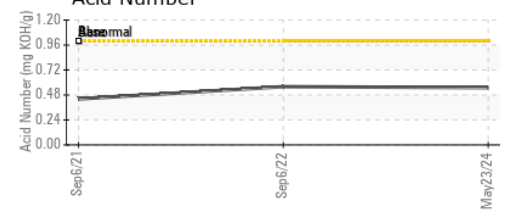
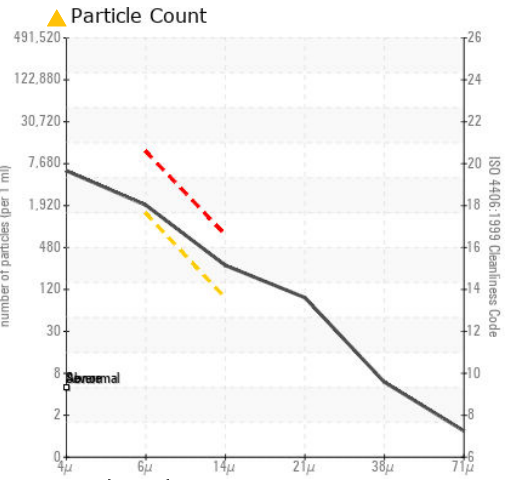
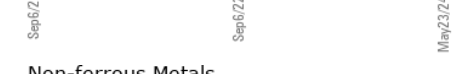
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | ▲ MODER |
| 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 45 | 47.1 | 47.6 | 46.1 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA017943 **Received** : 04 Jun 2024
Lab Number : 06199129 **Tested** : 05 Jun 2024
Unique Number : 11061252 **Diagnosed** : 06 Jun 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

GREENWASTE RECOVERY INC
 651 CHARLES ST
 SAN JOSE, CA
 US 95112
 Contact: ADOLFO ALDANA
 adolfo.aldana@greenwaste.com

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)