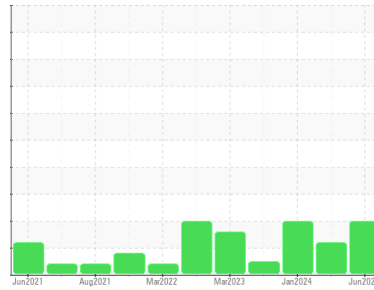




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER CSD 100S 7428867 (S/N 1050)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. 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 | KC130368 | KC122073 | KC122655 |
| Sample Date | Client Info | 07 Jun 2024 | 21 Mar 2024 | 29 Jan 2024 |
| Machine Age | hrs | 89151 | 12404 | 12223 |
| Oil Age | hrs | 202 | 0 | 0 |
| Oil Changed | Client Info | Not Chngd | N/A | N/A |
| Sample Status | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

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

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|----------------|-----------|----------|----|
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m 90 | 2 | 0 | 2 |
| Molybdenum | ppm | ASTM D5185m | <1 | <1 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 90 | 68 | 32 | 52 |
| Calcium | ppm | ASTM D5185m 2 | 0 | 3 | 2 |
| Phosphorus | ppm | ASTM D5185m | 15 | 22 | 32 |
| Zinc | ppm | ASTM D5185m | 18 | 7 | 8 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >25 | <1 | <1 | <1 |
| Sodium | ppm | ASTM D5185m | 15 | 6 | 8 |
| Potassium | ppm | ASTM D5185m >20 | 7 | 4 | 5 |
| Water | % | ASTM D6304 >0.05 | 0.029 | 0.020 | 0.028 |
| ppm Water | ppm | ASTM D6304 >500 | 291 | 205 | 285 |

FLUID CLEANLINESS

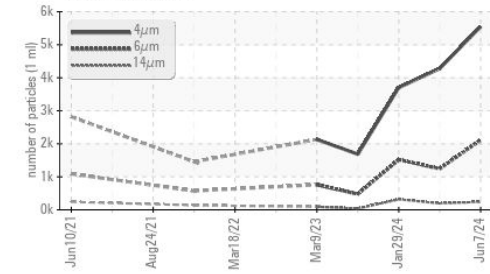
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | 5549 | 4278 | 3701 |
| Particles >6µm | ASTM D7647 >1300 | ▲ 2111 | 1241 | ▲ 1520 |
| Particles >14µm | ASTM D7647 >80 | ▲ 241 | ▲ 192 | ▲ 316 |
| Particles >21µm | ASTM D7647 >20 | ▲ 67 | ▲ 70 | ▲ 135 |
| Particles >38µm | ASTM D7647 >4 | ▲ 5 | 1 | ▲ 13 |
| Particles >71µm | ASTM D7647 >3 | 0 | 0 | 1 |
| Oil Cleanliness | ISO 4406 (c) >--/17/13 | ▲ 20/18/15 | ▲ 19/17/15 | ▲ 19/18/15 |

FLUID DEGRADATION

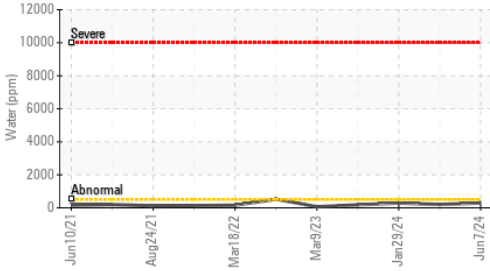
| method | limit/base | current | history1 | history2 | |
|------------------|------------|----------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.4 | 0.35 | 0.43 | 0.42 |

OIL ANALYSIS REPORT

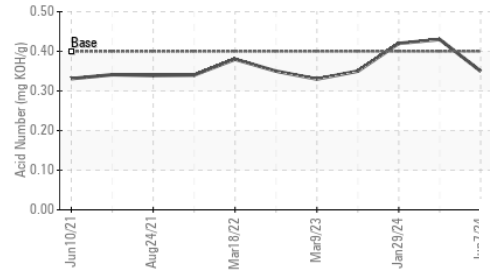
▲ Particle Trend



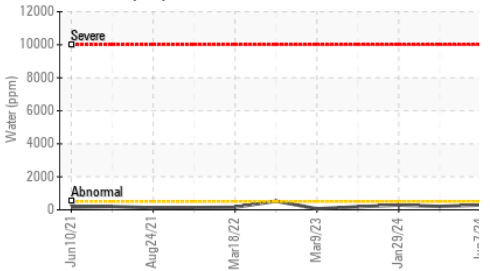
Water (KF)



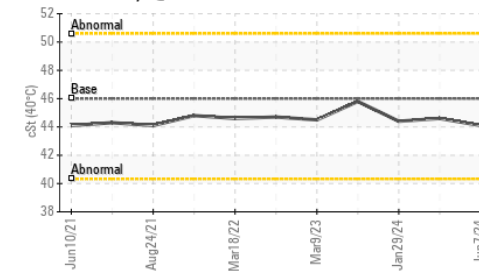
Acid Number



Water (KF)



Viscosity @ 40°C



| 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 | 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 | 44.6 | 44.4 |

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

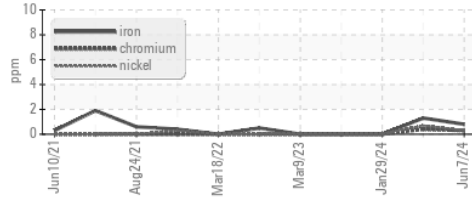
Color



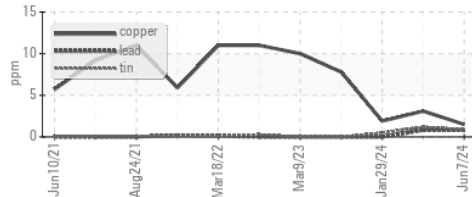
Bottom

GRAPHS

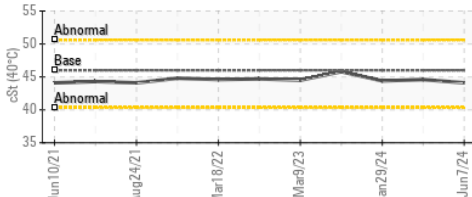
Ferrous Alloys



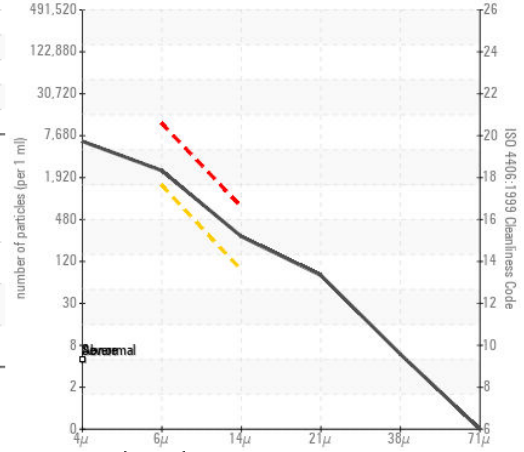
Non-ferrous Metals



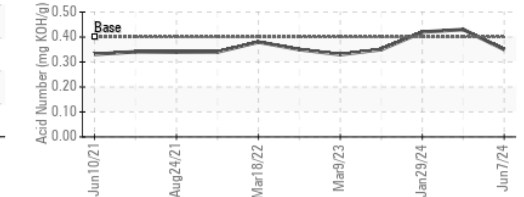
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : KC130368

Lab Number : 06217281

Unique Number : 11090145

Test Package : IND 2

Received : 21 Jun 2024

Tested : 25 Jun 2024

Diagnosed : 25 Jun 2024 - Don Baldrige

CARPENTER CONTRACTORS

3900 AVE G NW

WINTER HAVEN, FL

US 33880

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: