



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

**4914553 (S/N 1049)**

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 | <b>KCPA017959</b>  | ---          | ---      |
| Sample Date   | Client Info | <b>25 May 2024</b> | ---          | ---      |
| Machine Age   | hrs         | Client Info        | <b>26815</b> | ---      |
| Oil Age       | hrs         | Client Info        | <b>3000</b>  | ---      |
| Oil Changed   | Client Info | <b>Changed</b>     | ---          | ---      |
| Sample Status |             | <b>ABNORMAL</b>    | ---          | ---      |

## WEAR METALS

| method   | limit/base | current     | history1 | history2     |     |     |
|----------|------------|-------------|----------|--------------|-----|-----|
| Iron     | ppm        | ASTM D5185m | >50      | <b>0</b>     | --- | --- |
| Chromium | ppm        | ASTM D5185m | >10      | <b>&lt;1</b> | --- | --- |
| Nickel   | ppm        | ASTM D5185m | >3       | <b>0</b>     | --- | --- |
| Titanium | ppm        | ASTM D5185m | >3       | <b>0</b>     | --- | --- |
| Silver   | ppm        | ASTM D5185m | >2       | <b>0</b>     | --- | --- |
| Aluminum | ppm        | ASTM D5185m | >10      | <b>3</b>     | --- | --- |
| Lead     | ppm        | ASTM D5185m | >10      | <b>&lt;1</b> | --- | --- |
| Copper   | ppm        | ASTM D5185m | >50      | <b>11</b>    | --- | --- |
| Tin      | ppm        | ASTM D5185m | >10      | <b>&lt;1</b> | --- | --- |
| Vanadium | ppm        | ASTM D5185m |          | <b>0</b>     | --- | --- |
| Cadmium  | ppm        | ASTM D5185m |          | <b>0</b>     | --- | --- |

## ADDITIVES

| method     | limit/base | current     | history1 | history2     |     |     |
|------------|------------|-------------|----------|--------------|-----|-----|
| Boron      | ppm        | ASTM D5185m | 0        | <b>0</b>     | --- | --- |
| Barium     | ppm        | ASTM D5185m | 90       | <b>0</b>     | --- | --- |
| Molybdenum | ppm        | ASTM D5185m | 0        | <b>0</b>     | --- | --- |
| Manganese  | ppm        | ASTM D5185m |          | <b>0</b>     | --- | --- |
| Magnesium  | ppm        | ASTM D5185m | 100      | <b>4</b>     | --- | --- |
| Calcium    | ppm        | ASTM D5185m | 0        | <b>0</b>     | --- | --- |
| Phosphorus | ppm        | ASTM D5185m | 0        | <b>0</b>     | --- | --- |
| Zinc       | ppm        | ASTM D5185m | 0        | <b>0</b>     | --- | --- |
| Sulfur     | ppm        | ASTM D5185m | 23500    | <b>22443</b> | --- | --- |

## CONTAMINANTS

| method    | limit/base | current     | history1 | history2     |     |     |
|-----------|------------|-------------|----------|--------------|-----|-----|
| Silicon   | ppm        | ASTM D5185m | >25      | <b>&lt;1</b> | --- | --- |
| Sodium    | ppm        | ASTM D5185m |          | <b>0</b>     | --- | --- |
| Potassium | ppm        | ASTM D5185m | >20      | <b>2</b>     | --- | --- |
| Water     | %          | ASTM D6304  | >0.05    | <b>0.007</b> | --- | --- |
| ppm Water | ppm        | ASTM D6304  | >500     | <b>73</b>    | --- | --- |

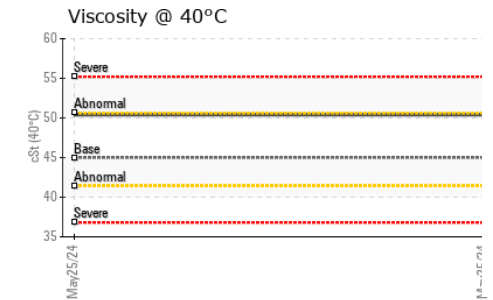
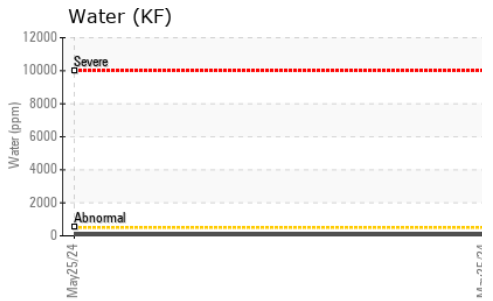
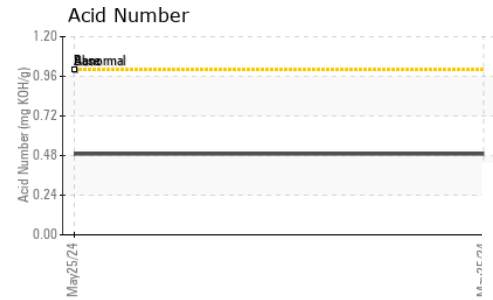
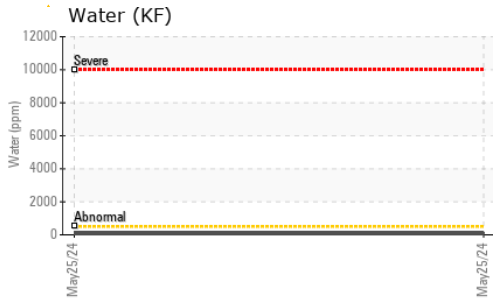
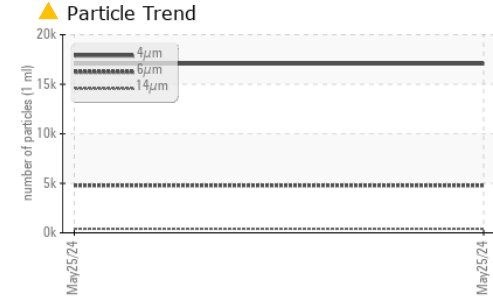
## FLUID CLEANLINESS

| method          | limit/base   | current      | history1          | history2 |
|-----------------|--------------|--------------|-------------------|----------|
| Particles >4µm  | ASTM D7647   | <b>17060</b> | ---               | ---      |
| Particles >6µm  | ASTM D7647   | >1300        | <b>▲ 4783</b>     | ---      |
| Particles >14µm | ASTM D7647   | >80          | <b>▲ 403</b>      | ---      |
| Particles >21µm | ASTM D7647   | >20          | <b>▲ 102</b>      | ---      |
| Particles >38µm | ASTM D7647   | >4           | <b>▲ 7</b>        | ---      |
| Particles >71µm | ASTM D7647   | >3           | <b>▲ 3</b>        | ---      |
| Oil Cleanliness | ISO 4406 (c) | >--/17/13    | <b>▲ 21/19/16</b> | ---      |

## FLUID DEGRADATION

| method           | limit/base | current    | history1 | history2    |     |     |
|------------------|------------|------------|----------|-------------|-----|-----|
| Acid Number (AN) | mg KOH/g   | ASTM D8045 | 1.0      | <b>0.49</b> | --- | --- |

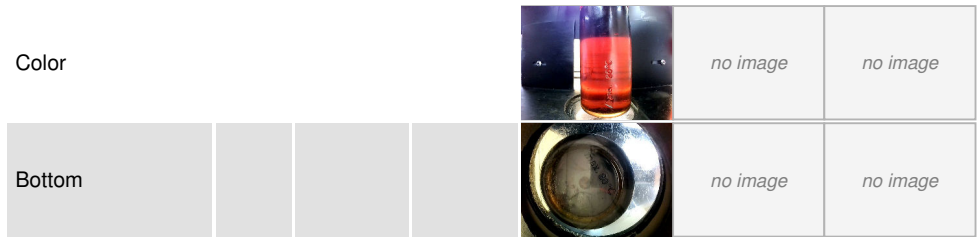
# OIL ANALYSIS REPORT



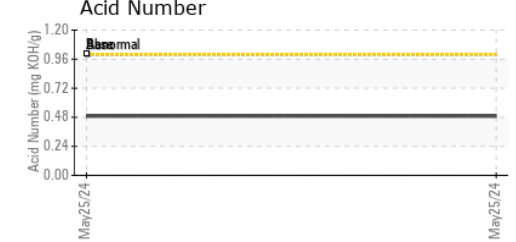
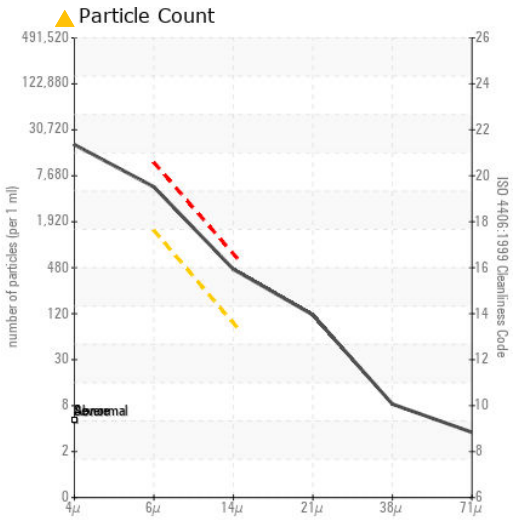
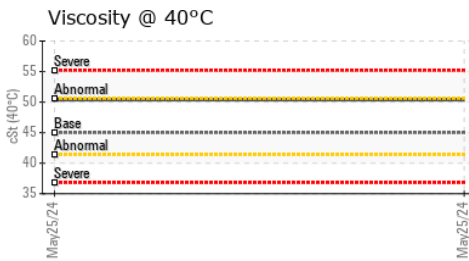
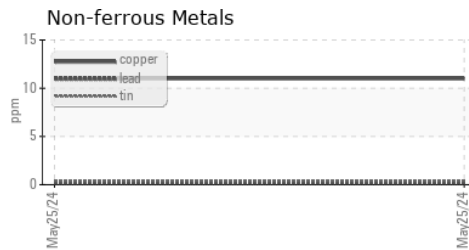
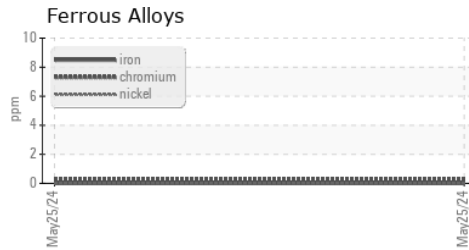
| PARAMETER        | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | *Visual    | >0.05   | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 45      | 50.4     | ---      |

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



## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA017959 **Received** : 04 Jun 2024  
**Lab Number** : 06199175 **Tested** : 05 Jun 2024  
**Unique Number** : 11061298 **Diagnosed** : 06 Jun 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**ALPHA LASER INC**  
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 CORONA, CA  
 US 92878  
 Contact: MOLLY  
 molly@alphalaser.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)