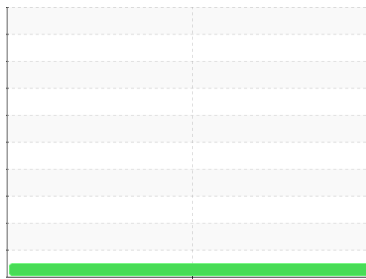


# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**KAESER 6989301**

Component  
**Compressor**

Fluid  
**KAESER SIGMA (OEM) M-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 no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

### 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>KCPA000145</b>	---	---
Sample Date	Client Info	<b>20 Mar 2023</b>	---	---
Machine Age	hrs Client Info	<b>13130</b>	---	---
Oil Age	hrs Client Info	<b>0</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>NORMAL</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >50	<b>0</b>	---	---
Chromium ppm	ASTM D5185m >10	<b>0</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>&lt;1</b>	---	---
Lead ppm	ASTM D5185m >10	<b>0</b>	---	---
Copper ppm	ASTM D5185m >50	<b>5</b>	---	---
Tin ppm	ASTM D5185m >10	<b>0</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>0</b>	---	---
Calcium ppm	ASTM D5185m 0	<b>0</b>	---	---
Phosphorus ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Zinc ppm	ASTM D5185m 0	<b>16</b>	---	---
Sulfur ppm	ASTM D5185m 23500	<b>21758</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >25	<b>10</b>	---	---
Sodium ppm	ASTM D5185m	<b>1</b>	---	---
Potassium ppm	ASTM D5185m >20	<b>0</b>	---	---
Water %	ASTM D6304 >0.05	<b>0.008</b>	---	---
ppm Water ppm	ASTM D6304 >500	<b>82.7</b>	---	---

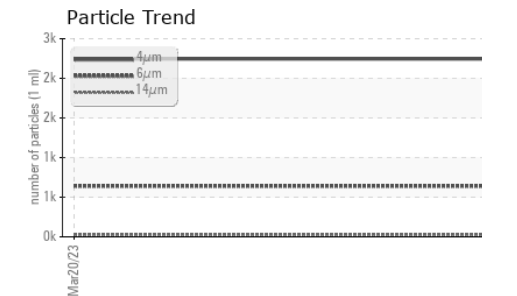
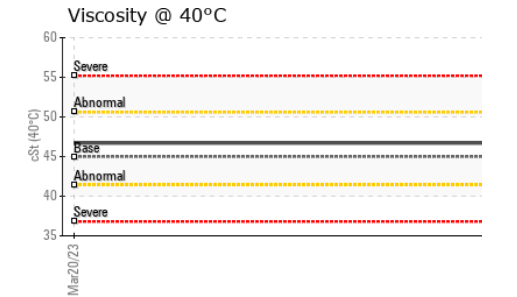
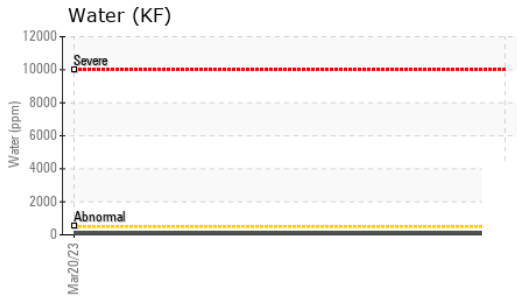
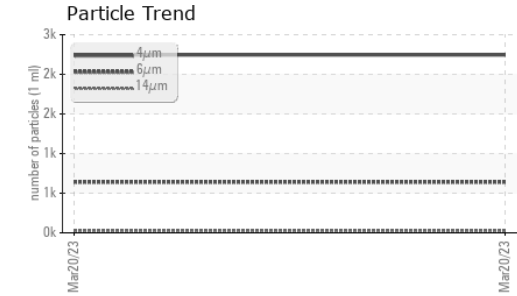
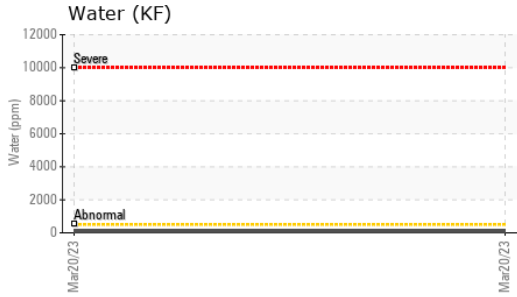
## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	<b>2245</b>	---	---
Particles >6µm	ASTM D7647 >1300	<b>641</b>	---	---
Particles >14µm	ASTM D7647 >80	<b>26</b>	---	---
Particles >21µm	ASTM D7647 >20	<b>5</b>	---	---
Particles >38µm	ASTM D7647 >4	<b>0</b>	---	---
Particles >71µm	ASTM D7647 >3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c) >--/17/13	<b>18/17/12</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D8045 1.0	<b>0.43</b>	---	---

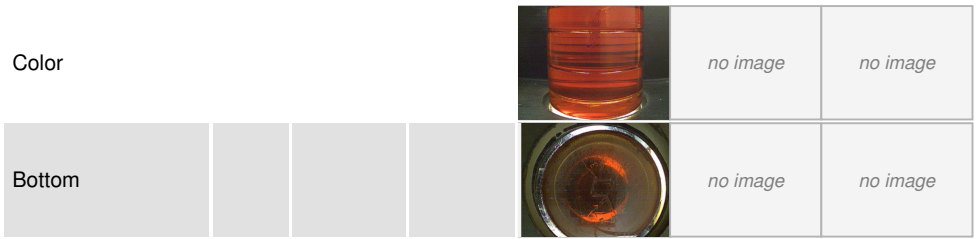
# OIL ANALYSIS REPORT



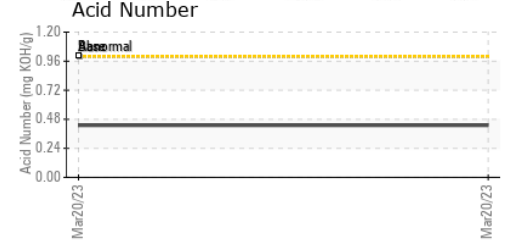
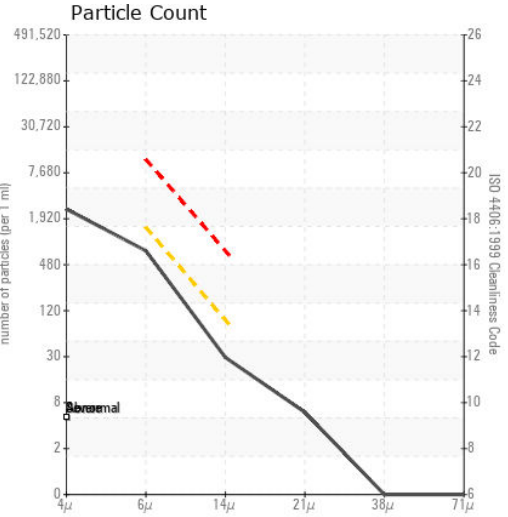
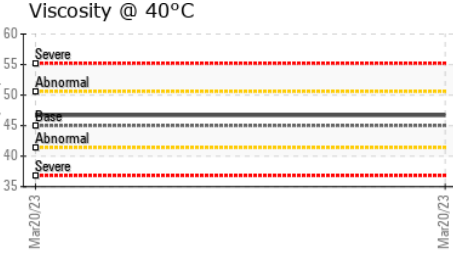
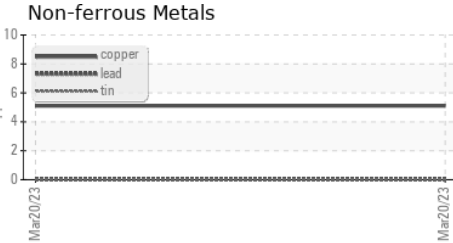
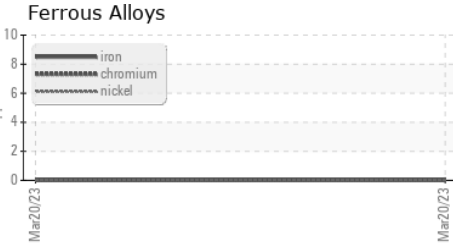
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---
Sand/Dirt	scalar	*Visual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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	<b>46.7</b>	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA000145 **Received** : 27 Mar 2023  
**Lab Number** : 05803485 **Diagnosed** : 30 Mar 2023  
**Unique Number** : 10401014 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**PENGUIN COMPUTING**  
 45800 NORTHPORT LOOP W  
 FREMONT, CA  
 US 94538  
 Contact: LAYALA  
 LAYALA@PENGUINCOMPUTING.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)

T:  
F: