



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**KAESER BS 60 1436571 (S/N 563570)**

Component  
**Compressor**

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

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Oil and 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		<b>KCPA015452</b>	---	---
Sample Date	Client Info		<b>22 Mar 2024</b>	---	---
Machine Age	hrs	Client Info	<b>116170</b>	---	---
Oil Age	hrs	Client Info	<b>0</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>2</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m >3	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m >3	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m >10	<b>2</b>	---	---
Lead	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >50	<b>8</b>	---	---
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---

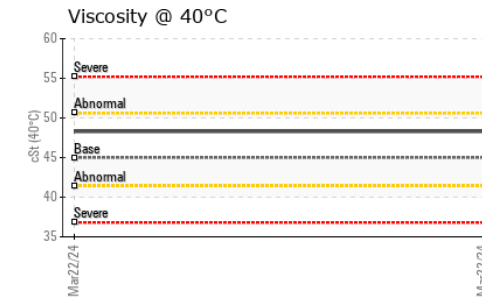
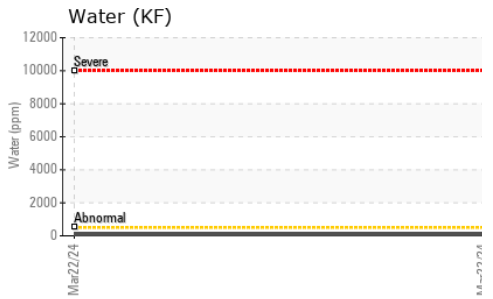
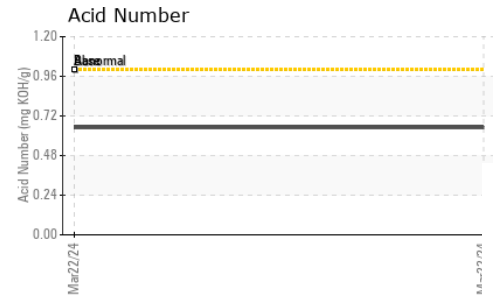
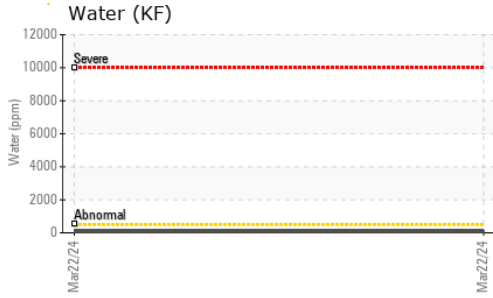
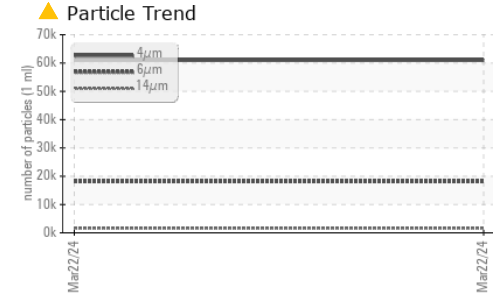
ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	---	---
Barium	ppm	ASTM D5185m 90	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m 100	<b>2</b>	---	---
Calcium	ppm	ASTM D5185m 0	<b>3</b>	---	---
Phosphorus	ppm	ASTM D5185m 0	<b>0</b>	---	---
Zinc	ppm	ASTM D5185m 0	<b>17</b>	---	---
Sulfur	ppm	ASTM D5185m 23500	<b>21567</b>	---	---

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	---	---
Sodium	ppm	ASTM D5185m	<b>0</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>1</b>	---	---
Water	%	ASTM D6304 >0.05	<b>0.007</b>	---	---
ppm Water	ppm	ASTM D6304 >500	<b>78</b>	---	---

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>60983</b>	---	---
Particles >6µm	ASTM D7647	>1300	<b>▲ 18130</b>	---	---
Particles >14µm	ASTM D7647	>80	<b>▲ 1611</b>	---	---
Particles >21µm	ASTM D7647	>20	<b>▲ 403</b>	---	---
Particles >38µm	ASTM D7647	>4	<b>▲ 12</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>1</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	<b>▲ 23/21/18</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	<b>0.65</b>	---	---

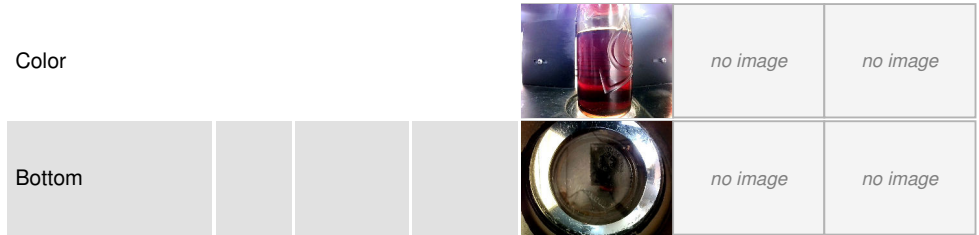
# OIL ANALYSIS REPORT



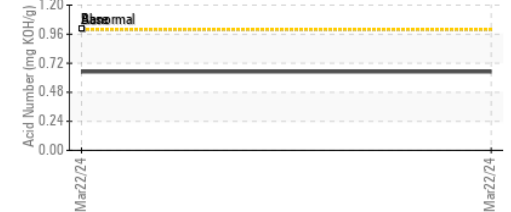
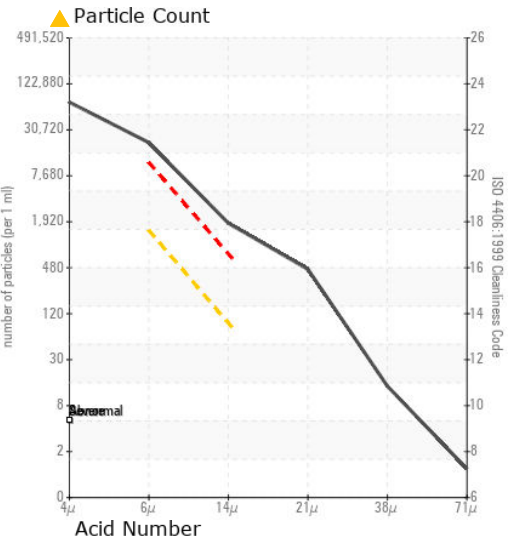
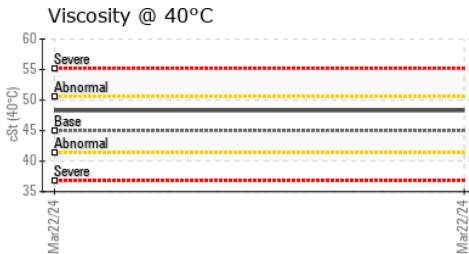
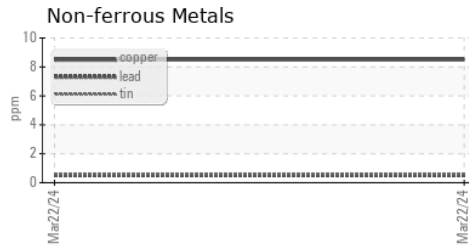
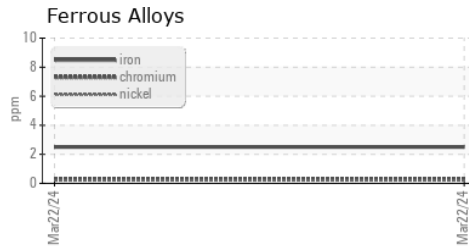
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	LIGHT	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	48.3	---

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



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA015452 **Received** : 27 Mar 2024  
**Lab Number** : 06131418 **Tested** : 28 Mar 2024  
**Unique Number** : 10950883 **Diagnosed** : 01 Apr 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**EMPIRE COMFORT SYSTEMS**  
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 BELLEVILLE, IL  
 US 62220  
 Contact: W. STRADER  
 wstrader@empirecomfort.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: