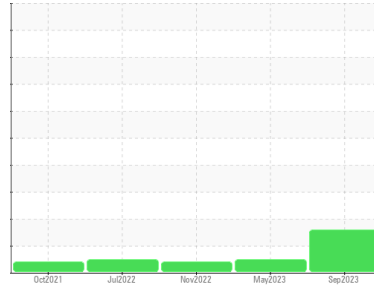




# PROBLEM SUMMARY

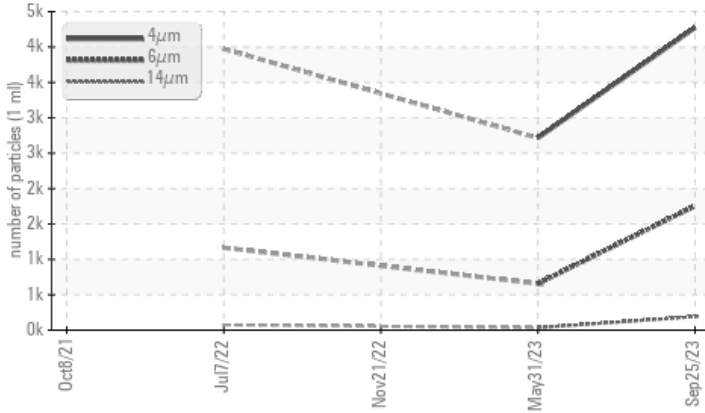
Sample Rating Trend



Machine Id  
**KAESER 7415821**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## 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.

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	NORMAL	ABNORMAL
Particles >6µm	ASTM D7647	>1300	▲ 1755	657	---
Particles >14µm	ASTM D7647	>80	▲ 191	33	---
Particles >21µm	ASTM D7647	>20	▲ 36	10	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 19/18/15	19/17/12	---

Customer Id: ABBERL  
 Sample No.: KC125045  
 Lab Number: 05964198  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### 31 May 2023 Diag: Angela Borella

NORMAL



The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 21 Nov 2022 Diag: Angela Borella

VIS DEBRIS



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. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 07 Jul 2022 Diag: Angela Borella

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

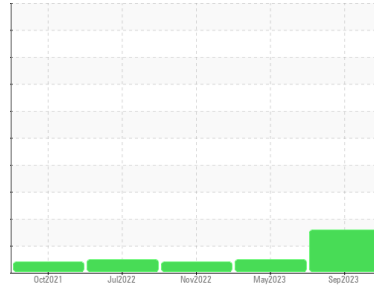
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**KAESER 7415821**

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			<b>KC125045</b>	KC122161	KC104684
Sample Date	Client Info			<b>25 Sep 2023</b>	31 May 2023	21 Nov 2022
Machine Age	hrs	Client Info		<b>13983</b>	12280	10296
Oil Age	hrs	Client Info		<b>0</b>	0	865
Oil Changed	Client Info			<b>N/A</b>	N/A	Not Changd
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>0</b>	0	0
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	<1	2
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>12</b>	5	2
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m	90	<b>0</b>	0	20
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	90	<b>0</b>	3	59
Calcium	ppm	ASTM D5185m	2	<b>0</b>	0	<1
Phosphorus	ppm	ASTM D5185m		<b>2</b>	4	0
Zinc	ppm	ASTM D5185m		<b>0</b>	2	0

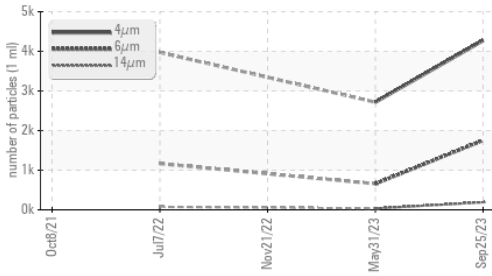
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	1
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	3	18
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Water	%	ASTM D6304	>0.05	<b>0.001</b>	0.004	0.019
ppm Water	ppm	ASTM D6304	>500	<b>3.2</b>	40.8	192.8

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>4271</b>	2715	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 1755</b>	657	---
Particles >14µm		ASTM D7647	>80	<b>▲ 191</b>	33	---
Particles >21µm		ASTM D7647	>20	<b>▲ 36</b>	10	---
Particles >38µm		ASTM D7647	>4	<b>1</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	<b>▲ 19/18/15</b>	19/17/12	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	<b>0.34</b>	0.36	0.36

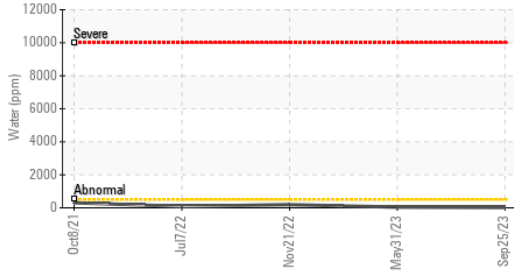
# OIL ANALYSIS REPORT

## ▲ Particle Trend



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	LIGHT	LIGHT ▲ 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

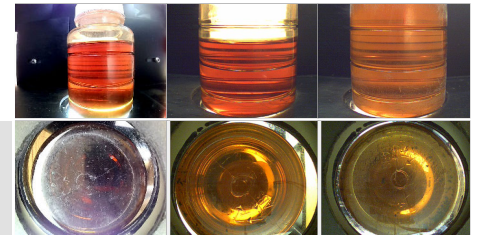
## Water (KF)



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	44.3	44.5

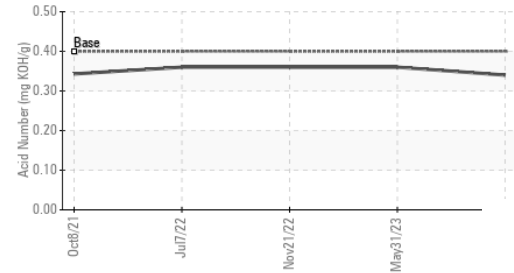
SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color



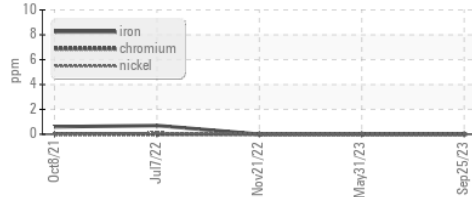
Bottom

## Acid Number

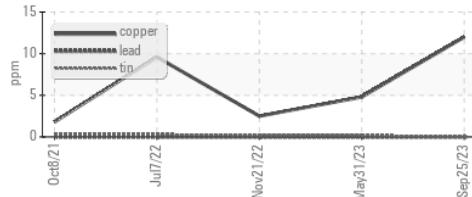


## GRAPHS

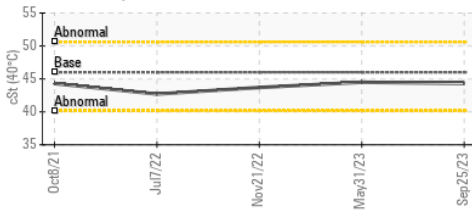
### Ferrous Alloys



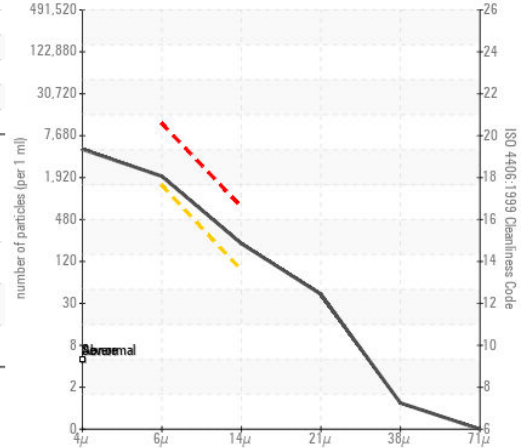
### Non-ferrous Metals



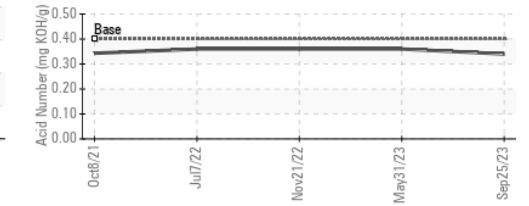
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC125045 **Received** : 28 Sep 2023  
**Lab Number** : 05964198 **Diagnosed** : 01 Oct 2023  
**Unique Number** : 10670749 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2

**ABB OPTICAL**  
 4530 OLYMPIC BLVD  
 ERLANGER, KY  
 US 41018  
 Contact: Service Manager

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: