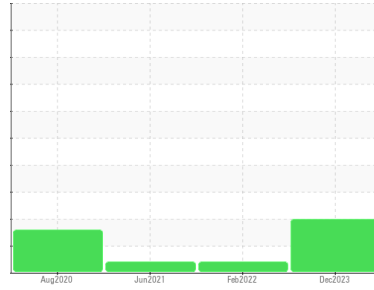




# PROBLEM SUMMARY

Sample Rating Trend

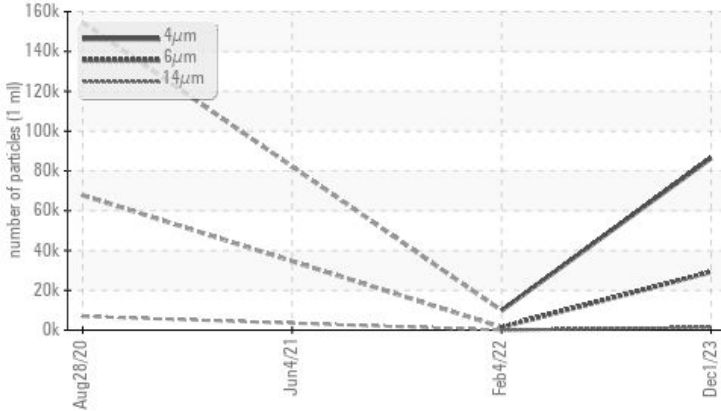


Machine Id  
**1584198 (S/N 1216)**

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	ASTM D7647	ISO	ABNORMAL	ATTENTION	ABNORMAL
Particles >6µm	>1300	▲ 29192	▲ 1503	---	
Particles >14µm	>80	▲ 1408	54	---	
Particles >21µm	>20	▲ 267	14	---	
Particles >38µm	>4	▲ 5	0	---	
Oil Cleanliness	ISO 4406 (c) >--/17/13	▲ 24/22/18	▲ 18/13	---	

Customer Id: SIGGARNC  
Sample No.: KCPA010813  
Lab Number: 06027175  
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

### 04 Feb 2022 Diag: Doug Bogart

ISO



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. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 04 Jun 2021 Diag: Doug Bogart

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



### 28 Aug 2020 Diag: Don Baldrige

ISO



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. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

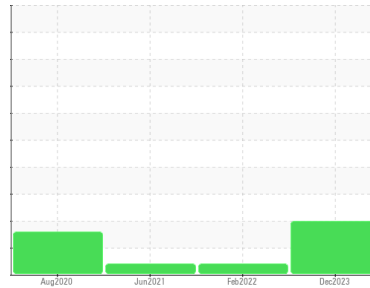
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**1584198 (S/N 1216)**  
 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>KCPA010813</b>	KCP34962	KCP32308
Sample Date	Client Info			<b>01 Dec 2023</b>	04 Feb 2022	04 Jun 2021
Machine Age	hrs	Client Info		<b>71280</b>	66045	64053
Oil Age	hrs	Client Info		<b>0</b>	1992	0
Oil Changed	Client Info			<b>N/A</b>	Changed	Not Chngd
Sample Status				<b>ABNORMAL</b>	ATTENTION	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>&lt;1</b>	1	2
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</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>2</b>	3	0
Lead	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>50	<b>2</b>	2	3
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m		<b>---</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

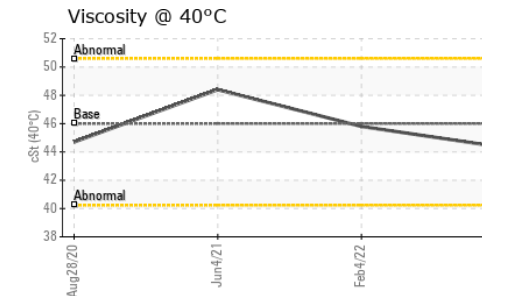
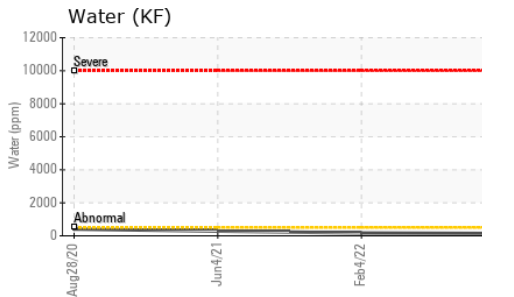
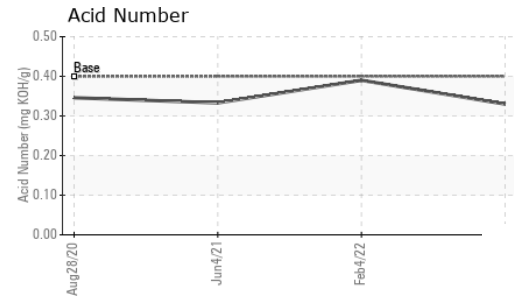
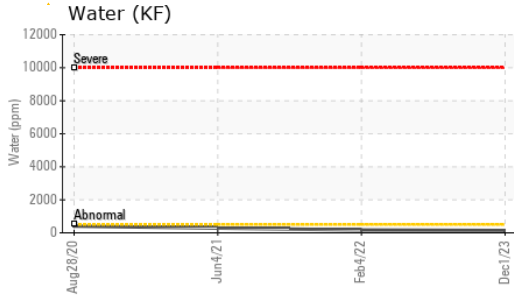
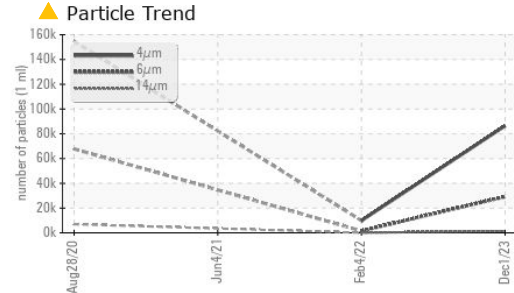
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	<1	1
Barium	ppm	ASTM D5185m	90	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	90	<b>44</b>	53	61
Calcium	ppm	ASTM D5185m	2	<b>2</b>	<1	3
Phosphorus	ppm	ASTM D5185m		<b>0</b>	5	6
Zinc	ppm	ASTM D5185m		<b>0</b>	8	9
Sulfur	ppm	ASTM D5185m		<b>18619</b>	20055	17035

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>&lt;1</b>	2	3
Sodium	ppm	ASTM D5185m		<b>10</b>	17	28
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Water	%	ASTM D6304	>0.05	<b>0.014</b>	0.017	0.028
ppm Water	ppm	ASTM D6304	>500	<b>141</b>	170.1	285.5

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>86376</b>	9858	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 29192</b>	▲ 1503	---
Particles >14µm		ASTM D7647	>80	<b>▲ 1408</b>	54	---
Particles >21µm		ASTM D7647	>20	<b>▲ 267</b>	14	---
Particles >38µm		ASTM D7647	>4	<b>▲ 5</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	<b>▲ 24/22/18</b>	▲ 18/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	<b>0.33</b>	0.39	0.333

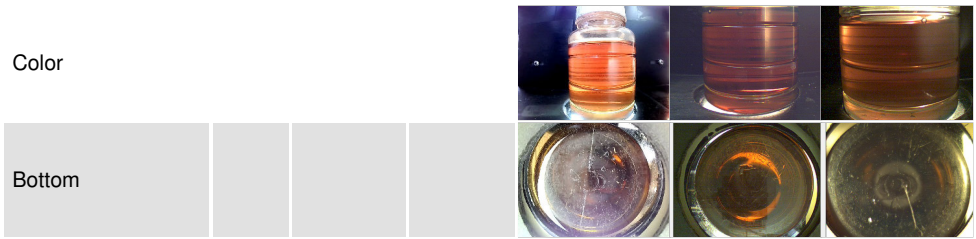
# OIL ANALYSIS REPORT



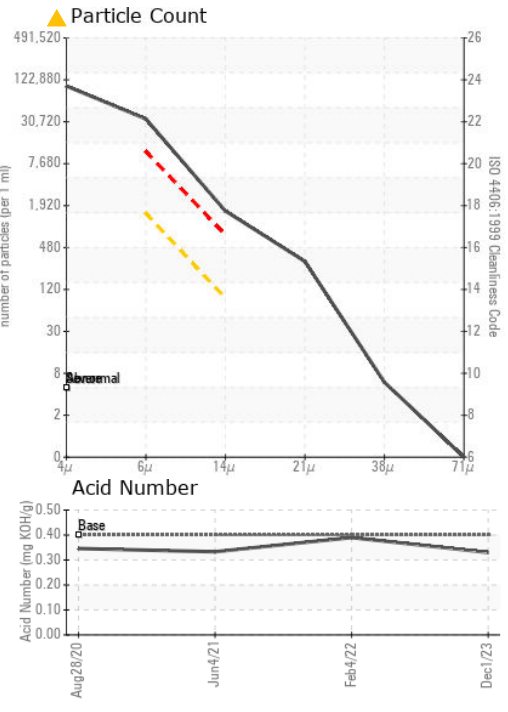
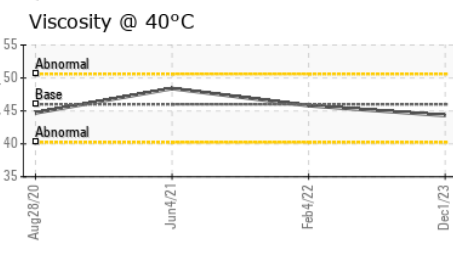
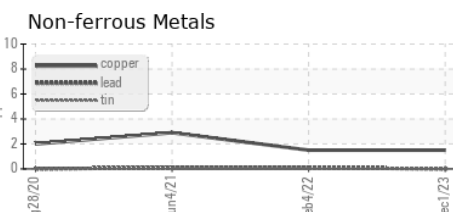
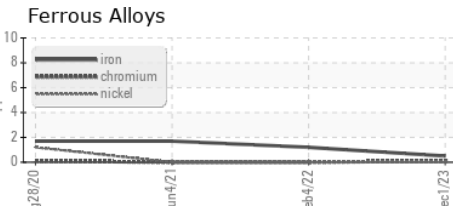
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	44.3	45.8

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA010813 **Received** : 06 Dec 2023  
**Lab Number** : 06027175 **Diagnosed** : 08 Dec 2023  
**Unique Number** : 10776966 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**SIGMA ELECTRIC MFG CORP**  
 120 SIGMA DR  
 GARNER, NC  
 US 27529  
 Contact: R. GOODMAN  
 rgoodman@sigma-engineered.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)