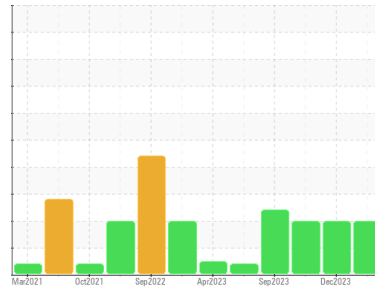




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**7136996 (S/N 1094)**  
 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>KC06151163</b>	KC06047777	KC05994390
Sample Date	Client Info	<b>20 Mar 2024</b>	11 Dec 2023	17 Oct 2023
Machine Age	hrs	<b>37417</b>	35032	33739
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >50	<b>0</b>	0	<1
Chromium ppm	ASTM D5185m >10	<b>0</b>	0	<1
Nickel ppm	ASTM D5185m >3	<b>&lt;1</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>&lt;1</b>	0	<1
Lead ppm	ASTM D5185m >10	<b>0</b>	0	0
Copper ppm	ASTM D5185m >50	<b>5</b>	9	<1
Tin ppm	ASTM D5185m >10	<b>&lt;1</b>	0	<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	<1
Manganese ppm	ASTM D5185m	<b>1</b>	<1	0
Magnesium ppm	ASTM D5185m 90	<b>3</b>	0	<1
Calcium ppm	ASTM D5185m 2	<b>&lt;1</b>	0	0
Phosphorus ppm	ASTM D5185m	<b>0</b>	57	39
Zinc ppm	ASTM D5185m	<b>0</b>	0	20

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >25	<b>&lt;1</b>	1	3
Sodium ppm	ASTM D5185m	<b>2</b>	3	5
Potassium ppm	ASTM D5185m >20	<b>1</b>	1	0
Water %	ASTM D6304 >0.05	<b>0.006</b>	0.035	0.005
ppm Water	ASTM D6304 >500	<b>60</b>	357	53.6

## FLUID CLEANLINESS

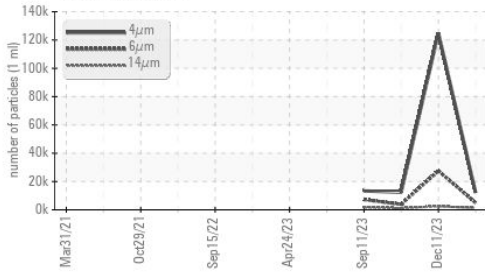
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	<b>12166</b>	124989	12401
Particles >6µm	ASTM D7647 >1300	<b>▲ 4960</b>	▲ 27526	▲ 3892
Particles >14µm	ASTM D7647 >80	<b>▲ 1325</b>	▲ 2490	▲ 1126
Particles >21µm	ASTM D7647 >20	<b>▲ 677</b>	▲ 813	▲ 608
Particles >38µm	ASTM D7647 >4	<b>▲ 63</b>	▲ 48	▲ 56
Particles >71µm	ASTM D7647 >3	<b>3</b>	2	3
Oil Cleanliness	ISO 4406 (c) >--/17/13	<b>▲ 21/19/18</b>	▲ 24/22/18	▲ 21/19/17

## FLUID DEGRADATION

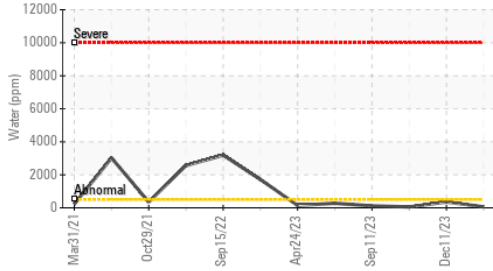
method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D8045 0.4	<b>0.55</b>	0.41	0.54

# OIL ANALYSIS REPORT

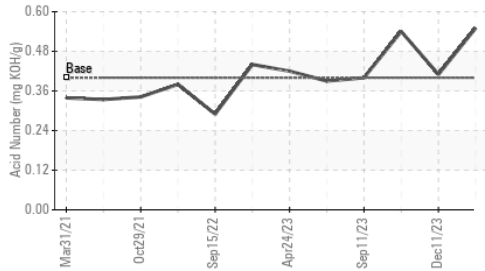
## Particle Trend



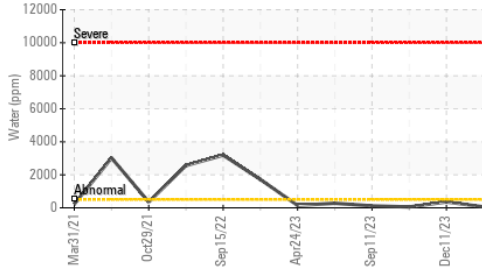
## Water (KF)



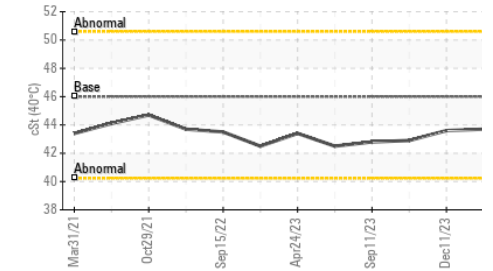
## Acid Number



## Water (KF)



## Viscosity @ 40°C



PARAMETER	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	LIGHT	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT
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	43.7	43.6	42.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
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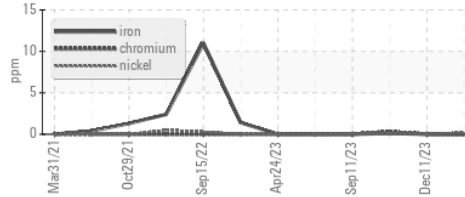
Color



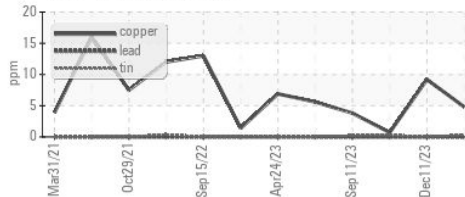
Bottom

## GRAPHS

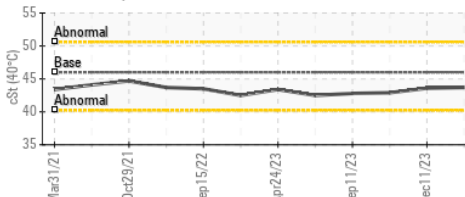
### Ferrous Alloys



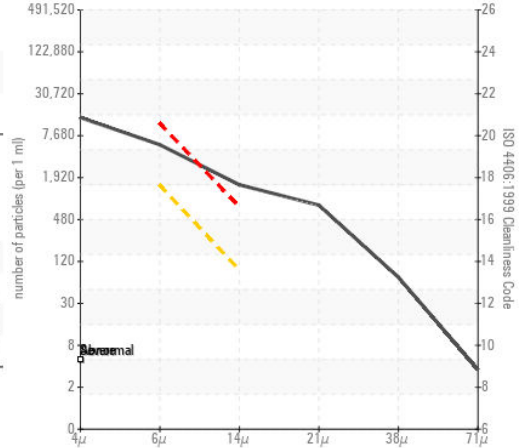
### Non-ferrous Metals



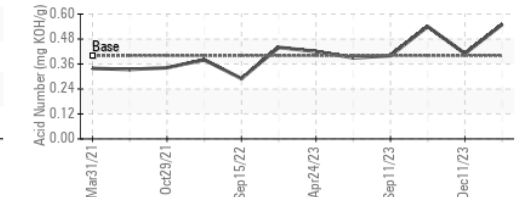
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC06151163  
**Lab Number** : 06151163  
**Unique Number** : 10981241  
**Test Package** : IND 2

**Received** : 16 Apr 2024  
**Tested** : 19 Apr 2024  
**Diagnosed** : 19 Apr 2024 - Don Baldrige

**BOEHRINGER INGELHEIM**  
 1112 AIRPORT PKWY SW  
 GAINESVILLE, GA  
 US 30501  
 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: