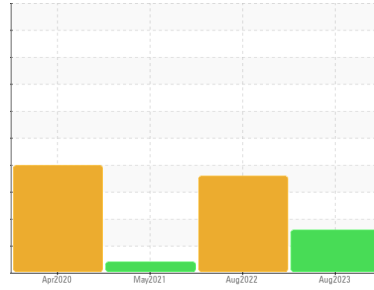


# PROBLEM SUMMARY

Sample Rating Trend



ISO



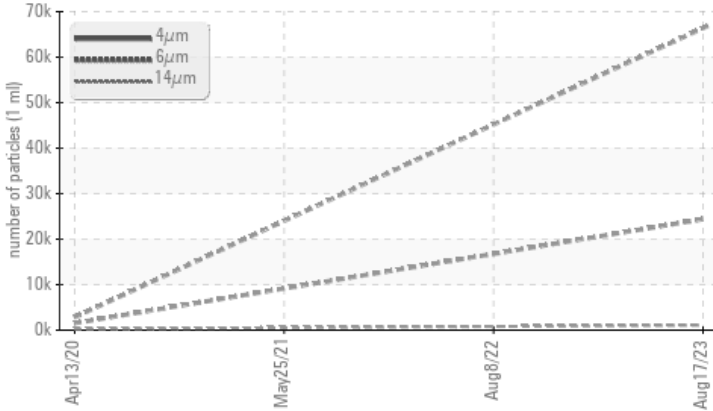
Machine Id  
**6902278 (S/N 1351)**

Component  
**Compressor**

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

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >6µm	ASTM D7647	>1300	▲ 24388	---	---
Particles >14µm	ASTM D7647	>80	▲ 1072	---	---
Particles >21µm	ASTM D7647	>20	▲ 196	---	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 23/22/17	---	---

Customer Id: FROBURN  
Sample No.: KCPA002840  
Lab Number: 05930392  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Angela Borella +1 800-237-1369  
[angela.borella@wearcheckusa.com](mailto:angela.borella@wearcheckusa.com)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

## HISTORICAL DIAGNOSIS

### 08 Aug 2022 Diag: Don Baldrige

#### WATER



Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. 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. There is a light concentration of water present in the oil. Free water present. The AN level is acceptable for this fluid.

[view report](#)



### 25 May 2021 Diag: Don Baldrige

#### VIS DEBRIS



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. 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](#)



### 13 Apr 2020 Diag: Jonathan Hester

#### WATER



Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. All component wear rates are normal. Appearance is hazy. There is a high amount of particulates present in the oil. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

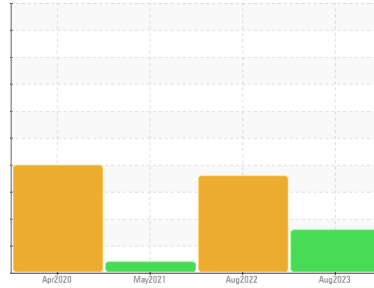
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**6902278 (S/N 1351)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## DIAGNOSIS

**Recommendation**  
 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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>KCPA002840</b>	KC102824	KC93554
Sample Date	Client Info			<b>17 Aug 2023</b>	08 Aug 2022	25 May 2021
Machine Age	hrs	Client Info		<b>9208</b>	7195	4382
Oil Age	hrs	Client Info		<b>8081</b>	1800	0
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>&lt;1</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	<1
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>50	<b>21</b>	28	14
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m		<b>---</b>	---	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	10
Barium	ppm	ASTM D5185m	90	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	90	<b>0</b>	<1	0
Calcium	ppm	ASTM D5185m	2	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m		<b>0</b>	3	<1
Zinc	ppm	ASTM D5185m		<b>4</b>	0	0
Sulfur	ppm	ASTM D5185m		<b>20902</b>	14044	13123

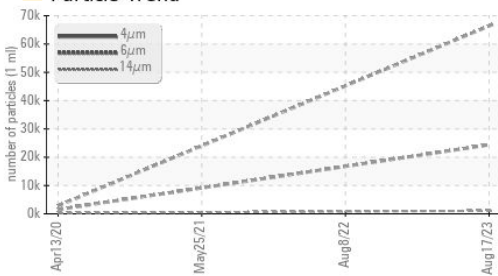
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	<1
Sodium	ppm	ASTM D5185m		<b>2</b>	<1	2
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Water	%	ASTM D6304	>0.05	<b>0.01</b>	▲ 0.112	0.004
ppm Water	ppm	ASTM D6304	>500	<b>100.0</b>	▲ 1120	49.2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>66382</b>	---	---
Particles >6µm		ASTM D7647	>1300	▲ <b>24388</b>	---	---
Particles >14µm		ASTM D7647	>80	▲ <b>1072</b>	---	---
Particles >21µm		ASTM D7647	>20	▲ <b>196</b>	---	---
Particles >38µm		ASTM D7647	>4	<b>6</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ <b>23/22/17</b>	---	---

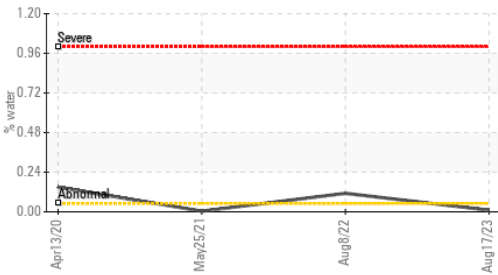
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	<b>0.33</b>	0.30	0.285

# OIL ANALYSIS REPORT

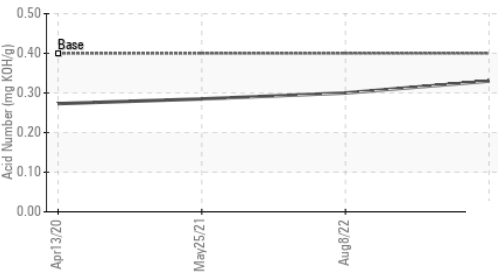
## ▲ Particle Trend



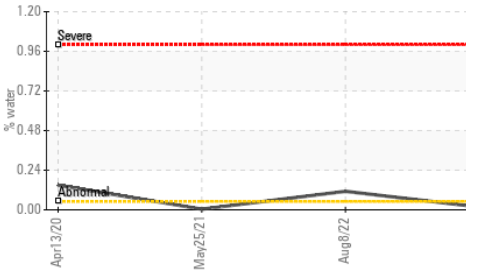
## Water



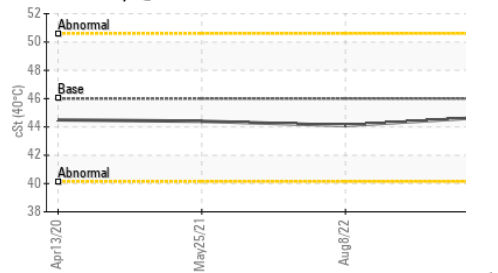
## Acid Number



## Water



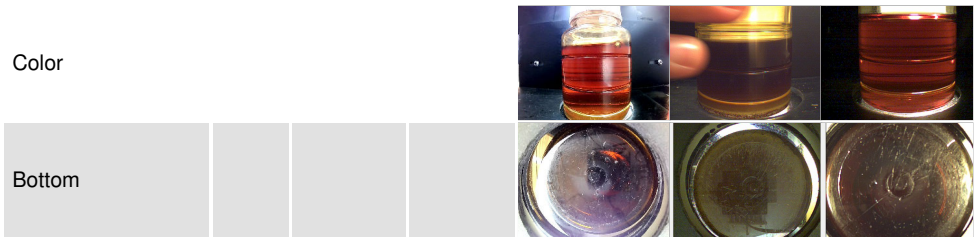
## Viscosity @ 40°C



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	<b>LIGHT</b>	▲ MODER	▲ 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	<b>NEG</b>	▲ 0.2%	NEG
Free Water	scalar	*Visual		<b>NEG</b>	▲ 2.0	NEG

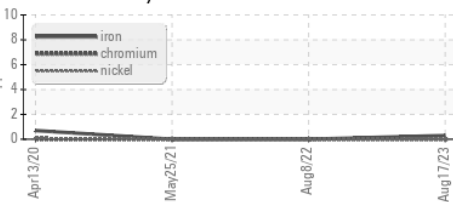
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	46	<b>44.7</b>	44.1	44.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
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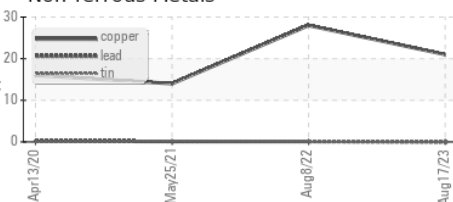


## GRAPHS

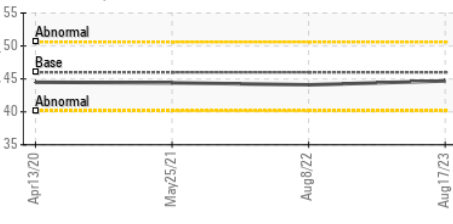
### Ferrous Alloys



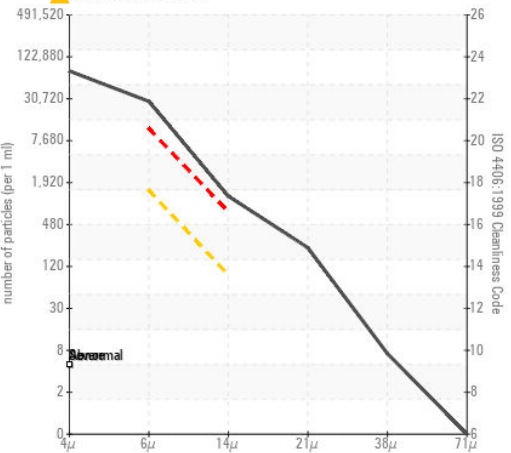
### Non-ferrous Metals



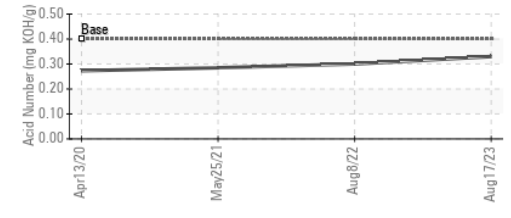
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA002840 **Received** : 21 Aug 2023  
**Lab Number** : 05930392 **Diagnosed** : 23 Aug 2023  
**Unique Number** : 10615663 **Diagnostician** : Angela Borella  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**FROST CONVERTING SYSTEMS INC**  
 2056 WILLOW SPRINGS LN  
 BURLINGTON, NC  
 US 27215  
 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: