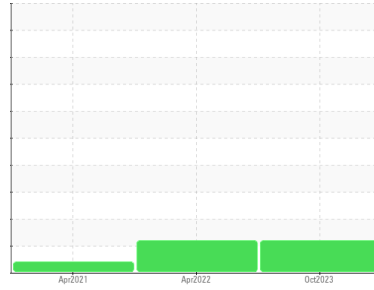




# PROBLEM SUMMARY

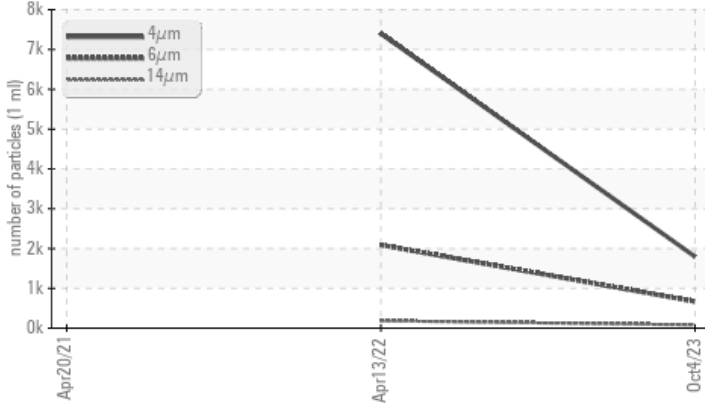
Sample Rating Trend



Machine Id  
**4392875 (S/N 1108)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) S-460 (--- QTS)**

## 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			ATTENTION	ABNORMAL	ABNORMAL
Particles >14µm	ASTM D7647	>80	▲ <b>81</b>	▲ 184	---
Particles >21µm	ASTM D7647	>20	▲ <b>32</b>	▲ 45	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ <b>18/17/14</b>	▲ 18/15	---

Customer Id: WILLYO  
 Sample No.: KCPA006255  
 Lab Number: 05981896  
 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

### 13 Apr 2022 Diag: Jonathan Hester

ISO



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 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



### 20 Apr 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 acceptable for the time in service.

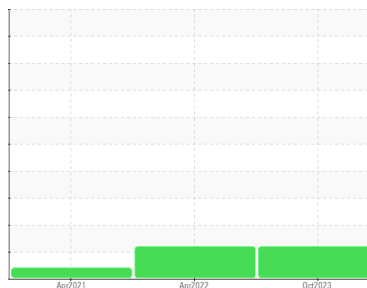
view report



Machine Id  
**4392875 (S/N 1108)**

Component  
**Compressor**

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



## 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 moderate 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>KCPA006255</b>	KCP44357	KCP35653
Sample Date	Client Info			<b>04 Oct 2023</b>	13 Apr 2022	20 Apr 2021
Machine Age	hrs	Client Info		<b>33323</b>	27650	23073
Oil Age	hrs	Client Info		<b>0</b>	4577	3623
Oil Changed	Client Info			<b>N/A</b>	Changed	Changed
Sample Status				<b>ATTENTION</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>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>9</b>	8	4
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	0
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

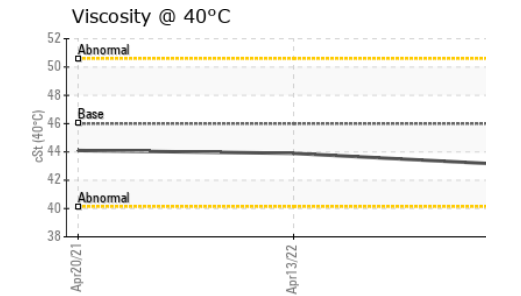
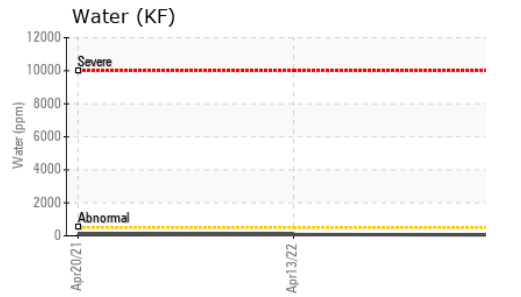
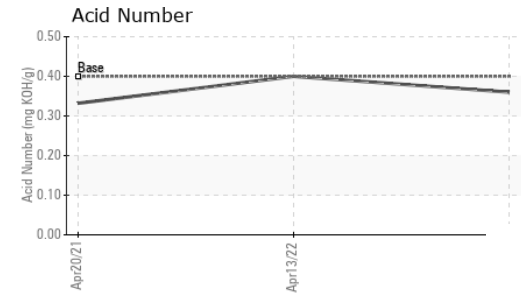
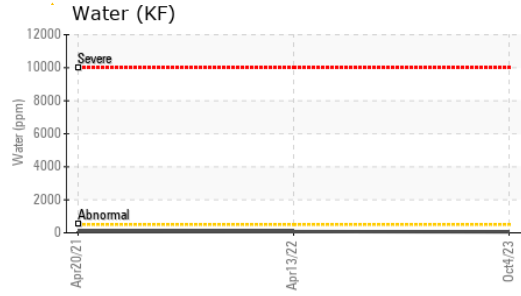
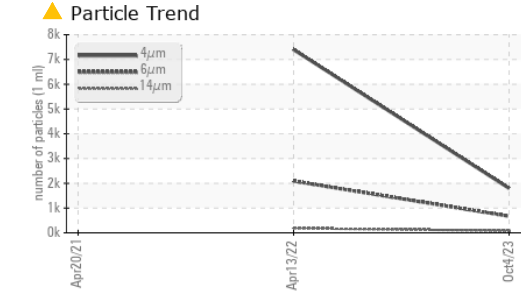
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	<1	10
Barium	ppm	ASTM D5185m	90	<b>3</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	90	<b>4</b>	<1	7
Calcium	ppm	ASTM D5185m	2	<b>11</b>	0	0
Phosphorus	ppm	ASTM D5185m		<b>63</b>	8	4
Zinc	ppm	ASTM D5185m		<b>153</b>	59	44
Sulfur	ppm	ASTM D5185m		<b>14948</b>	14768	15170

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	0
Sodium	ppm	ASTM D5185m		<b>2</b>	<1	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Water	%	ASTM D6304	>0.05	<b>0.005</b>	0.007	0.008
ppm Water	ppm	ASTM D6304	>500	<b>58.8</b>	75.8	85.4

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>1796</b>	7398	---
Particles >6µm		ASTM D7647	>1300	<b>668</b>	▲ 2088	---
Particles >14µm		ASTM D7647	>80	▲ <b>81</b>	▲ 184	---
Particles >21µm		ASTM D7647	>20	▲ <b>32</b>	▲ 45	---
Particles >38µm		ASTM D7647	>4	<b>1</b>	2	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ <b>18/17/14</b>	▲ 18/15	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	<b>0.36</b>	0.40	0.332

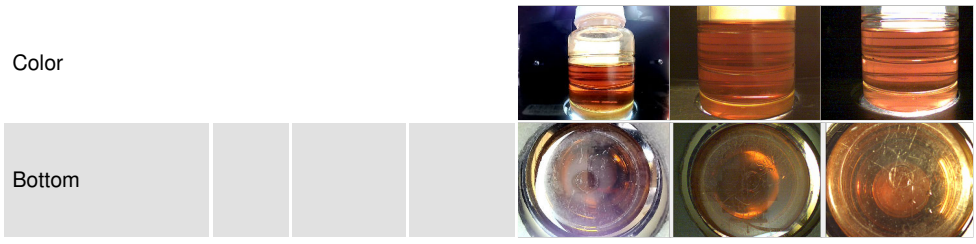
# OIL ANALYSIS REPORT



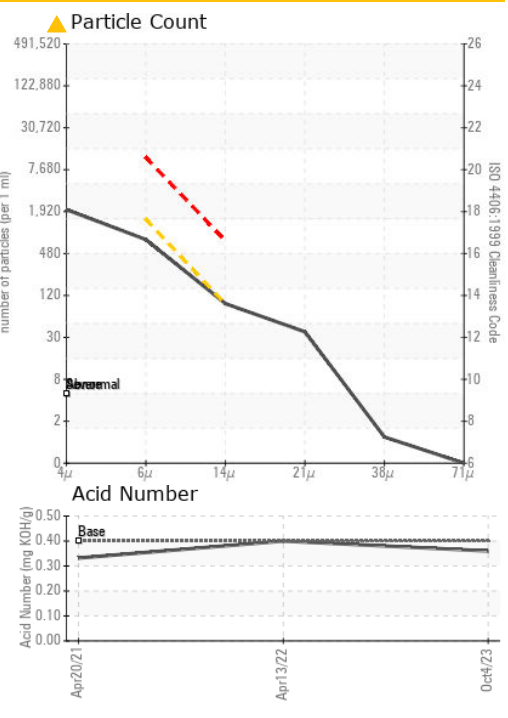
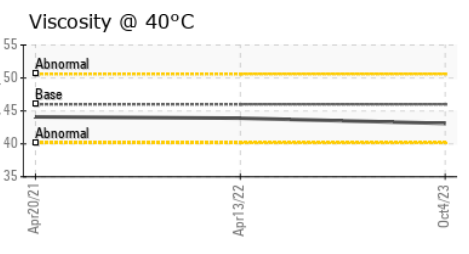
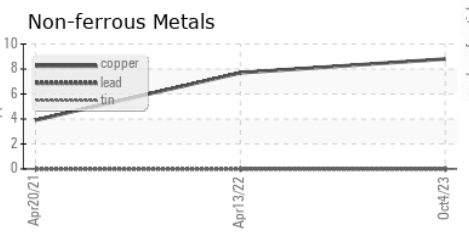
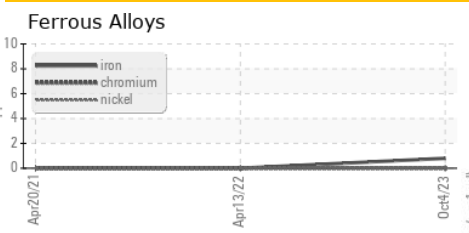
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	43.1	43.9

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCPA006255 **Received** : 17 Oct 2023  
**Lab Number** : 05981896 **Diagnosed** : 19 Oct 2023  
**Unique Number** : 10699191 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**WILLIAMS ENERGY**  
 1145 23RD AVE  
 LYONS, KS  
 US 67554  
 Contact: RAY ENNS  
 ray.enns@williams.com  
 T:  
 F:

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)