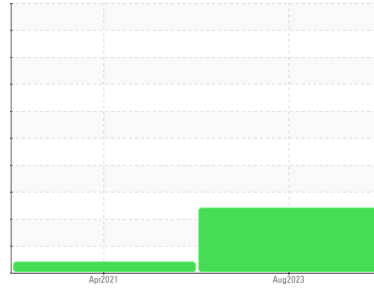


# PROBLEM SUMMARY

Sample Rating Trend



## VISCOSITY

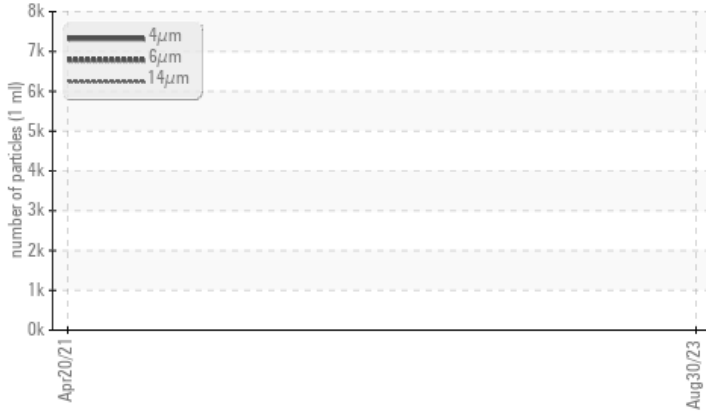


Machine Id  
**7415838 (S/N 1023)**

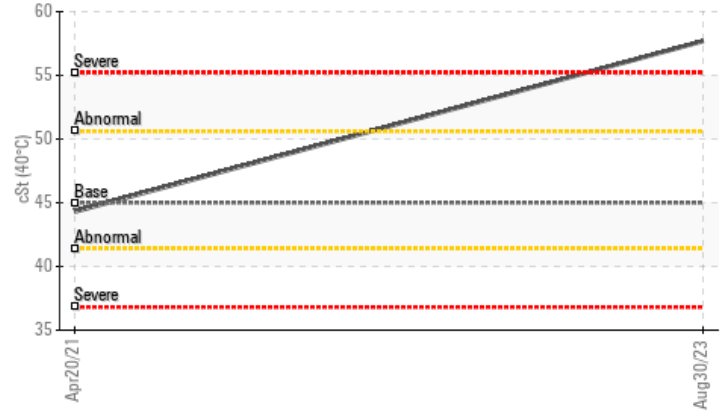
Component  
**Compressor**  
Fluid  
**KAESER SIGMA (OEM) M-460 (--- GAL)**

### COMPONENT CONDITION SUMMARY

▲ Particle Trend



▲ Viscosity @ 40°C



### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### PROBLEMATIC TEST RESULTS

Sample Status	ASTM	Value	ABNORMAL	ABNORMAL	---
Particles >6µm	ASTM D7647	>1300	▲ 2708	---	---
Particles >14µm	ASTM D7647	>80	▲ 365	---	---
Particles >21µm	ASTM D7647	>20	▲ 120	---	---
Particles >38µm	ASTM D7647	>4	▲ 7	---	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 20/19/16	---	---
Visc @ 40°C	cSt ASTM D445	45	▲ 57.69	44.3	---

Customer Id: HERSAN  
Sample No.: KCP40082D  
Lab Number: 05961259  
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

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

### 20 Apr 2021 Diag: Doug Bogart

#### VIS DEBRIS



Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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.

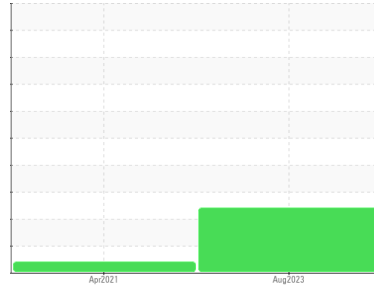
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Machine Id  
**7415838 (S/N 1023)**

Component  
**Compressor**  
Fluid  
**KAESER SIGMA (OEM) M-460 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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 oil viscosity is higher than normal. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>KCP40082D</b>	KC83088	---
Sample Date	Client Info			<b>30 Aug 2023</b>	20 Apr 2021	---
Machine Age	hrs	Client Info		<b>23290</b>	3940	---
Oil Age	hrs	Client Info		<b>3000</b>	3940	---
Oil Changed	Client Info			<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>0</b>	<1	---
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>50	<b>7</b>	16	---
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	---
Antimony	ppm	ASTM D5185m		<b>---</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	9	---
Barium	ppm	ASTM D5185m	90	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Magnesium	ppm	ASTM D5185m	100	<b>0</b>	0	---
Calcium	ppm	ASTM D5185m	0	<b>0</b>	0	---
Phosphorus	ppm	ASTM D5185m	0	<b>&lt;1</b>	4	---
Zinc	ppm	ASTM D5185m	0	<b>0</b>	0	---
Sulfur	ppm	ASTM D5185m	23500	<b>14664</b>	14579	---

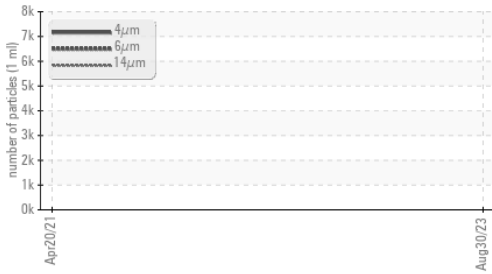
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>0</b>	0	---
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	---
Water	%	ASTM D6304	>0.05	<b>0.005</b>	0.006	---
ppm Water	ppm	ASTM D6304	>500	<b>59.7</b>	63.9	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>7544</b>	---	---
Particles >6µm		ASTM D7647	>1300	<b>▲ 2708</b>	---	---
Particles >14µm		ASTM D7647	>80	<b>▲ 365</b>	---	---
Particles >21µm		ASTM D7647	>20	<b>▲ 120</b>	---	---
Particles >38µm		ASTM D7647	>4	<b>▲ 7</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	<b>▲ 20/19/16</b>	---	---

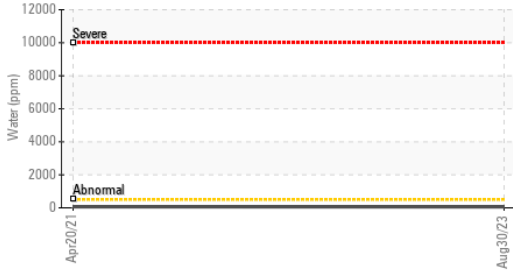
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	<b>0.65</b>	0.445	---

# OIL ANALYSIS REPORT

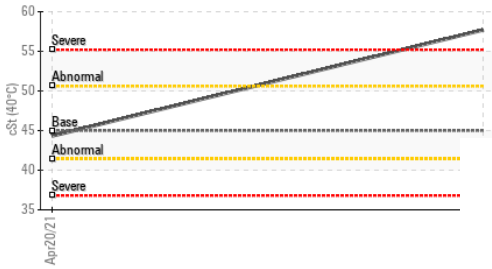
### ▲ Particle Trend



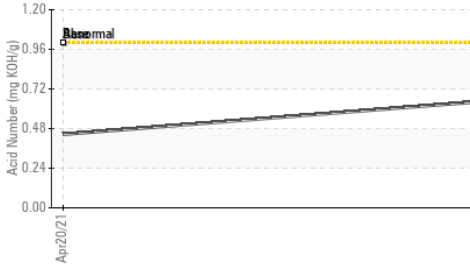
### Water (KF)



### ▲ Viscosity @ 40°C



### Acid Number



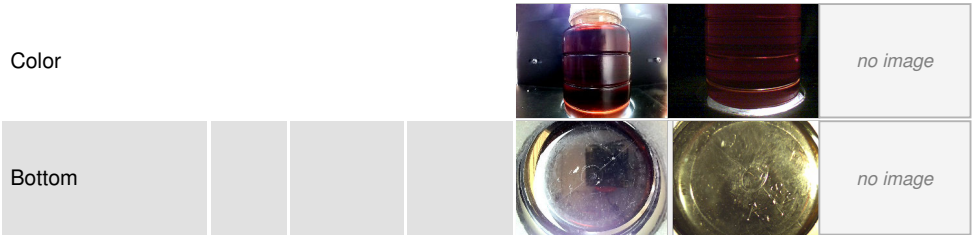
### Water (KF)



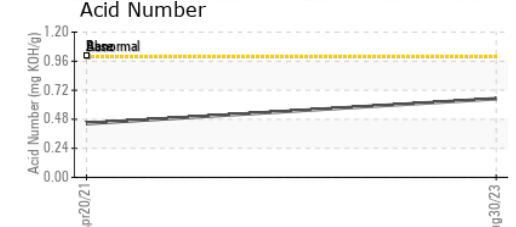
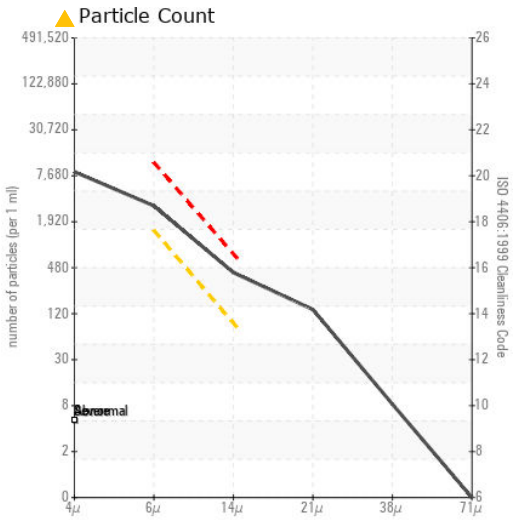
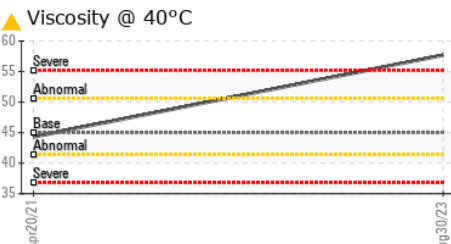
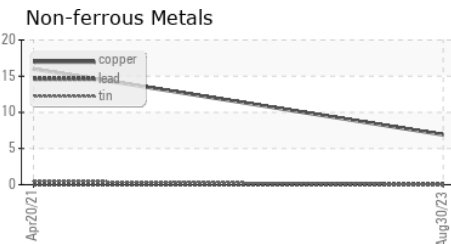
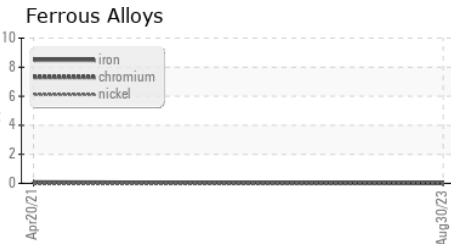
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	▲ 57.69	44.3

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCP40082D **Received** : 26 Sep 2023  
**Lab Number** : 05961259 **Diagnosed** : 29 Sep 2023  
**Unique Number** : 10662472 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**HERAEUS PRECIOUS METALS NORTH**  
 15524 CARMENITA RD  
 SANTA FE SPRINGS, CA  
 US 90670  
 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: