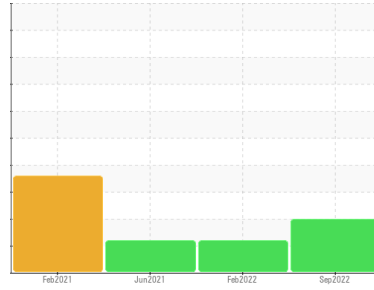


# PROBLEM SUMMARY

Sample Rating Trend



ISO



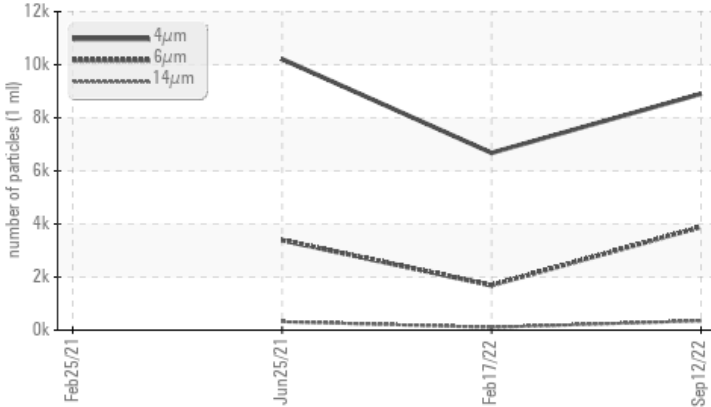
Machine Id  
**KAESER SM 10 6695883 (S/N 1073)**

Component  
**Compressor**

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

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

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	Limit	ABNORMAL	ATTENTION	ABNORMAL
Particles >6µm	ASTM D7647	>1300	▲ <b>3887</b>	▲ 1689	▲ 3391
Particles >14µm	ASTM D7647	>80	▲ <b>352</b>	▲ 106	▲ 319
Particles >21µm	ASTM D7647	>20	▲ <b>99</b>	▲ 30	▲ 59
Particles >38µm	ASTM D7647	>4	▲ <b>14</b>	2	3
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ <b>20/19/16</b>	▲ 18/14	▲ 19/15

Customer Id: VULCOR  
Sample No.: KC105561  
Lab Number: 05646625  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

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

### 17 Feb 2022 Diag: Don Baldrige

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 moderate 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



### 25 Jun 2021 Diag: Angela Borella

ISO



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



### 25 Feb 2021 Diag: Angela Borella

WATER



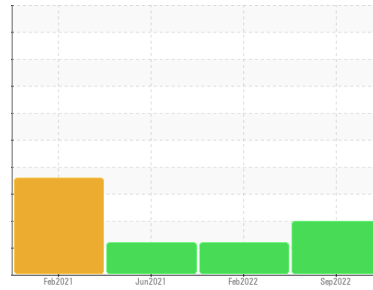
Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. Free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

view report



Machine Id  
**KAESER SM 10 6695883 (S/N 1073)**

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



## DIAGNOSIS

### ▲ Recommendation

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	history 1	history 2
Sample Number			<b>KC105561</b>	KC85833	KC92535
Sample Date			<b>12 Sep 2022</b>	17 Feb 2022	25 Jun 2021
Machine Age	hrs		<b>19678</b>	16423	12918
Oil Age	hrs		<b>3000</b>	4000	2400
Oil Changed			<b>Not Changed</b>	Changed	Not Changed
Sample Status			<b>ABNORMAL</b>	ATTENTION	ABNORMAL

## WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m	>50	<b>0</b>	<1	<1
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>	<1	1
Aluminum	ppm ASTM D5185m	>10	<b>0</b>	<1	<1
Lead	ppm ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm ASTM D5185m	>50	<b>26</b>	20	7
Tin	ppm ASTM D5185m	>10	<b>&lt;1</b>	0	0
Antimony	ppm ASTM D5185m		<b>---</b>	0	0
Vanadium	ppm ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m		<b>0</b>	3	15
Barium	ppm ASTM D5185m	90	<b>0</b>	0	28
Molybdenum	ppm ASTM D5185m		<b>0</b>	0	0
Manganese	ppm ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m	90	<b>21</b>	14	62
Calcium	ppm ASTM D5185m	2	<b>0</b>	0	1
Phosphorus	ppm ASTM D5185m		<b>1</b>	1	2
Zinc	ppm ASTM D5185m		<b>28</b>	35	25

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m	>25	<b>&lt;1</b>	<1	0
Sodium	ppm ASTM D5185m		<b>7</b>	6	14
Potassium	ppm ASTM D5185m	>20	<b>0</b>	0	<1
Water	% ASTM D6304	>0.05	<b>0.020</b>	0.009	0.034
ppm Water	ppm ASTM D6304	>500	<b>204.2</b>	95.3	343.2

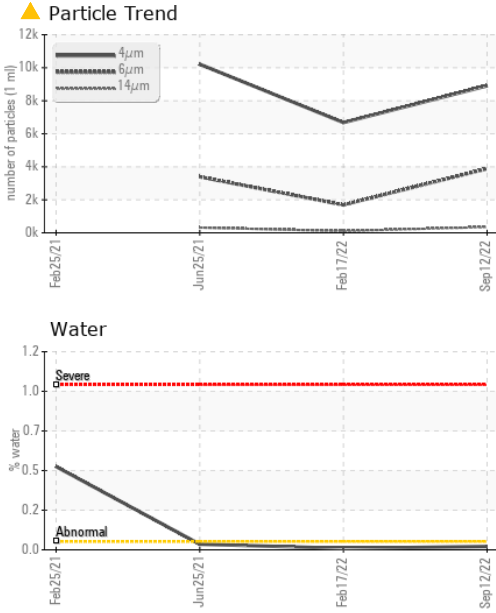
## FLUID CLEANLINESS

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647		<b>8905</b>	6678	10212
Particles >6µm	ASTM D7647	>1300	▲ <b>3887</b>	▲ 1689	▲ 3391
Particles >14µm	ASTM D7647	>80	▲ <b>352</b>	▲ 106	▲ 319
Particles >21µm	ASTM D7647	>20	▲ <b>99</b>	▲ 30	▲ 59
Particles >38µm	ASTM D7647	>4	▲ <b>14</b>	2	3
Particles >71µm	ASTM D7647	>3	▲ <b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ <b>20/19/16</b>	▲ 18/14	▲ 19/15

## FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g ASTM D8045	0.4	<b>0.28</b>	0.32	0.348

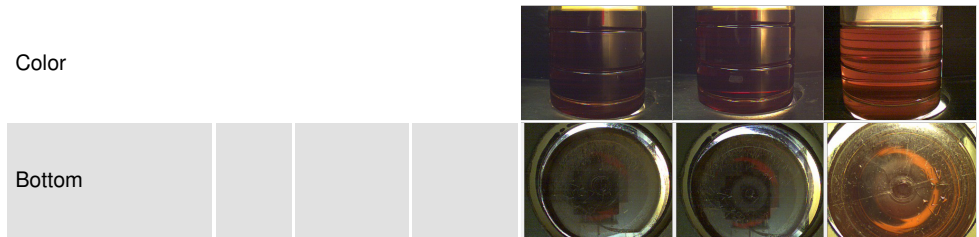
# OIL ANALYSIS REPORT



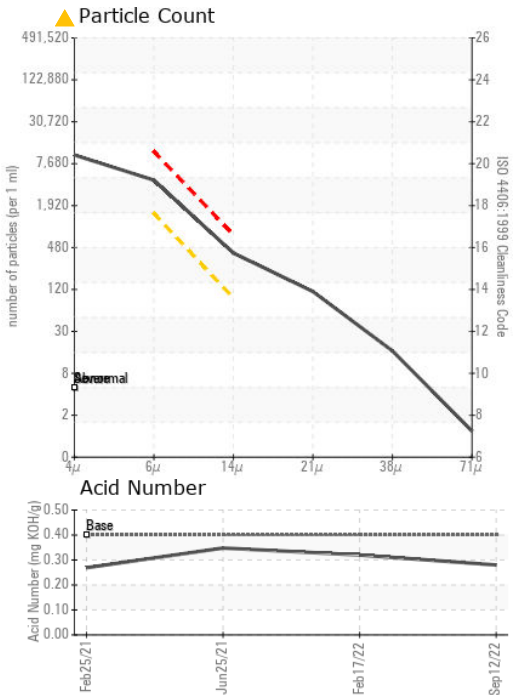
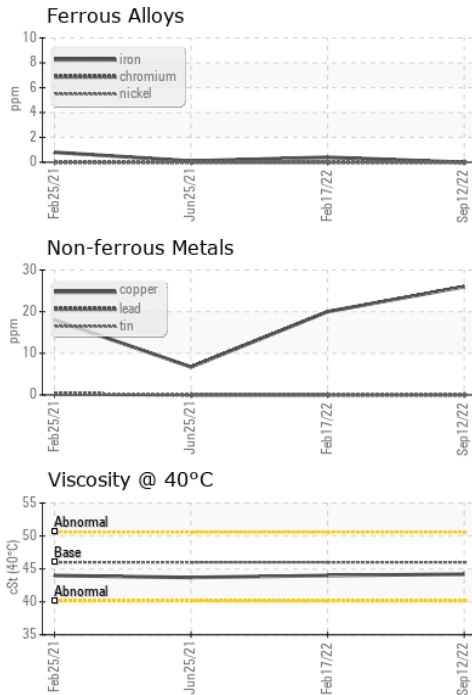
PARAMETER	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	46	44.0	43.7

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC105561 **Received** : 20 Sep 2022  
**Lab Number** : 05646625 **Diagnosed** : 22 Sep 2022  
**Unique Number** : 10141164 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2

**VULCAN INDUSTRIES**  
 701 4TH AVE  
 CORAOPOLIS, PA  
 USA 15108  
 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: