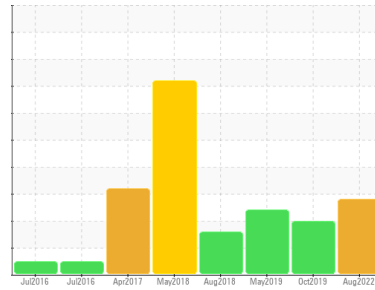


# PROBLEM SUMMARY

Sample Rating Trend



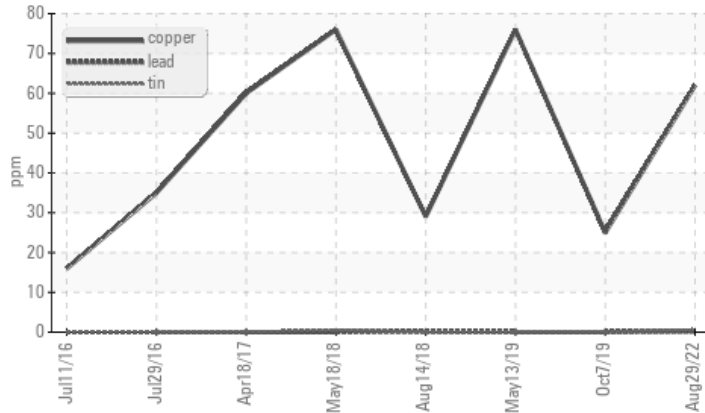
**WEAR**



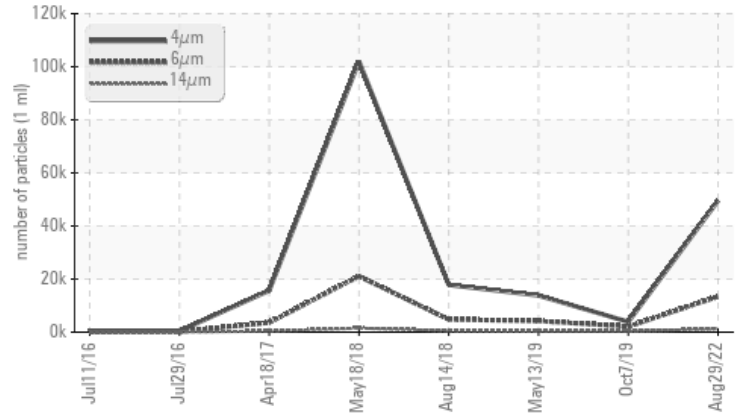
Machine Id  
**KAESER SK 19 0187601**  
Component  
**Compressor**  
Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Non-ferrous Metals



### ▲ 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			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL
Copper	ppm	ASTM D5185m >50	▲ <b>62</b>	25	▲ 76
Particles >6µm		ASTM D7647 >1300	▲ <b>13425</b>	▲ 2116	▲ 4185
Particles >14µm		ASTM D7647 >80	▲ <b>1211</b>	▲ 360	▲ 341
Particles >21µm		ASTM D7647 >20	▲ <b>476</b>	▲ 121	▲ 79
Particles >38µm		ASTM D7647 >4	▲ <b>48</b>	▲ 18	▲ 6
Oil Cleanliness		ISO 4406 (c) >--/17/13	▲ <b>23/21/17</b>	▲ 18/16	▲ 19/16

Customer Id: KOCGAI  
Sample No.: KC05637683  
Lab Number: 05637683  
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

### 07 Oct 2019 Diag: Don Baldrige

ISO



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. All component wear rates are normal. There is a high amount of particulates present in the oil. 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 May 2019 Diag: Don Baldrige

WEAR



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. The copper level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid.

view report



### 14 Aug 2018 Diag: Angela Borella

ISO

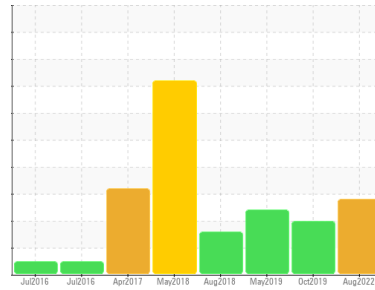


The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Machine Id  
**KAESER SK 19 0187601**  
Component  
**Compressor**  
Fluid  
**KAESER SIGMA (OEM) S-460 (--- GAL)**



**DIAGNOSIS**

▲ **Recommendation**

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

▲ **Wear**

The copper level is abnormal. All other 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>KC05637683</b>	KC04825495	KC04733661
Sample Date			<b>29 Aug 2022</b>	07 Oct 2019	13 May 2019
Machine Age	hrs		<b>17181</b>	12096	8775
Oil Age	hrs		<b>0</b>	3321	6217
Oil Changed			<b>N/A</b>	Not Changd	Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

**WEAR METALS**

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >50	<b>3</b>	1	2
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >3	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>2</b>	0	0
Aluminum	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >50	<b>▲ 62</b>	25	<b>▲ 76</b>
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>	0	0
Barium	ppm	ASTM D5185m 90	<b>&lt;1</b>	27	0
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 90	<b>1</b>	55	11
Calcium	ppm	ASTM D5185m 2	<b>0</b>	2	0
Phosphorus	ppm	ASTM D5185m	<b>1</b>	3	5
Zinc	ppm	ASTM D5185m	<b>156</b>	162	200

**CONTAMINANTS**

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>0</b>	<1	0
Sodium	ppm	ASTM D5185m	<b>0</b>	13	3
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Water	%	ASTM D6304 >0.05	<b>0.010</b>	0.015	0.011
ppm Water	ppm	ASTM D6304 >500	<b>105.7</b>	158.4	110

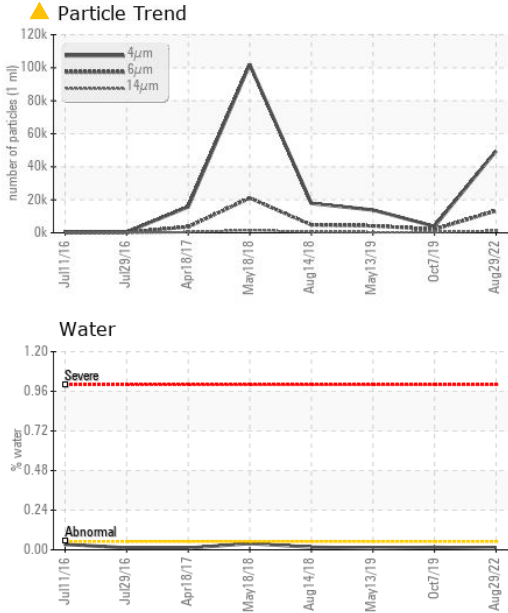
**FLUID CLEANLINESS**

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647		<b>49539</b>	3884	13824
Particles >6µm	ASTM D7647	>1300	<b>▲ 13425</b>	▲ 2116	▲ 4185
Particles >14µm	ASTM D7647	>80	<b>▲ 1211</b>	▲ 360	▲ 341
Particles >21µm	ASTM D7647	>20	<b>▲ 476</b>	▲ 121	▲ 79
Particles >38µm	ASTM D7647	>4	<b>▲ 48</b>	▲ 18	▲ 6
Particles >71µm	ASTM D7647	>3	<b>1</b>	1	1
Oil Cleanliness	ISO 4406 (c)	>--/17/13	<b>▲ 23/21/17</b>	▲ 18/16	▲ 19/16

**FLUID DEGRADATION**

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.4	<b>0.35</b>	0.361	0.444

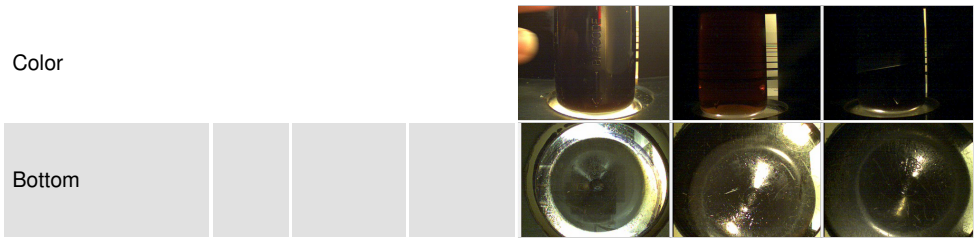
# OIL ANALYSIS REPORT



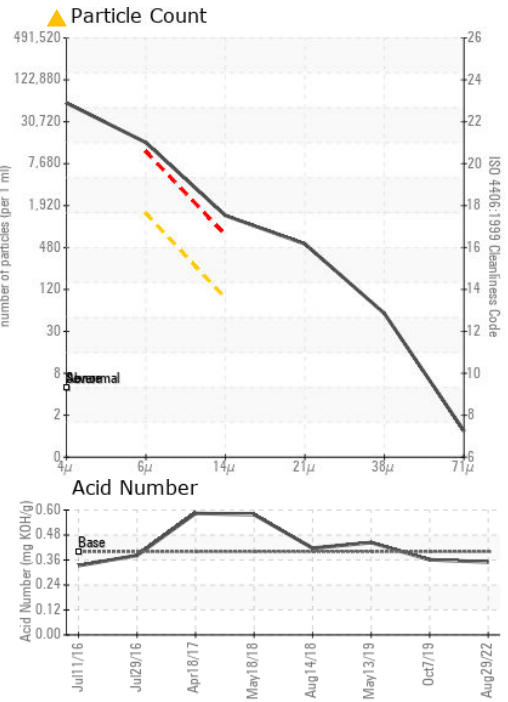
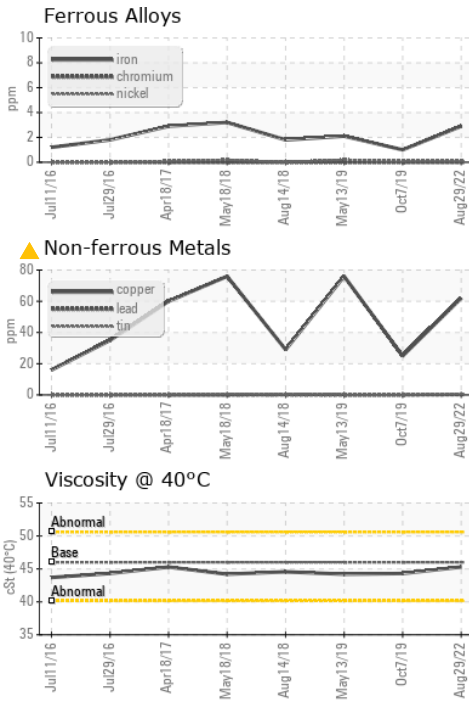
VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	<b>LIGHT</b>	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	<b>NEG</b>	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	46	<b>45.3</b>	44.3

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
---------------	--------	------------	---------	-----------	-----------



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC05637683  
**Lab Number** : 05637683  
**Unique Number** : 10127213  
**Test Package** : IND 2

**KOCH FOODS**  
 950 INDUSTRIAL BLVD  
 GAINESVILLE, GA  
 USA 30501  
 Contact:

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: