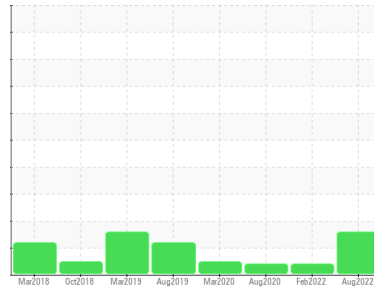


# PROBLEM SUMMARY

Sample Rating Trend



ISO



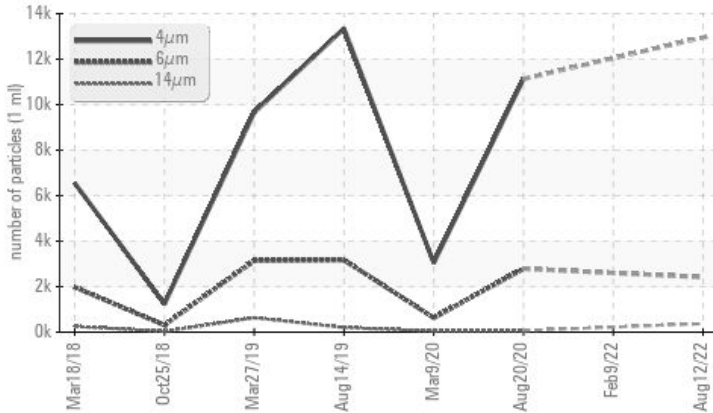
Machine Id  
**KAESER CSD 60 3373360 (S/N 1080)**

Component  
**Compressor**

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

## 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			ABNORMAL	ABNORMAL	ABNORMAL
Particles >6µm	ASTM D7647	>1300	▲ 2415	---	▲ 2788
Particles >14µm	ASTM D7647	>80	▲ 373	---	61
Particles >21µm	ASTM D7647	>20	▲ 76	---	9
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 21/18/16	---	▲ 19/13

Customer Id: PERCOA  
Sample No.: KC91317  
Lab Number: 05621809  
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

### 09 Feb 2022 Diag: Don Baldrige

#### VIS DEBRIS



We recommend you service the filters on this component. 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



### 20 Aug 2020 Diag: Don Baldrige

#### 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 silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 09 Mar 2020 Diag: Angela Borella

#### NORMAL



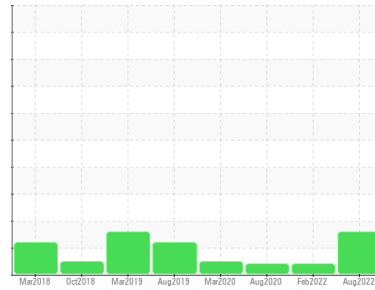
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Machine Id  
**KAESER CSD 60 3373360 (S/N 1080)**

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



## 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 high amount of particulates present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid.

## SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number			<b>KC91317</b>	KC85559	KC83311
Sample Date			<b>12 Aug 2022</b>	09 Feb 2022	20 Aug 2020
Machine Age	hrs		<b>54519</b>	52345	47198
Oil Age	hrs		<b>3800</b>	2300	2000
Oil Changed			<b>Not Changed</b>	Not Changed	Not Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >50	<b>0</b>	0	<1
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >3	<b>1</b>	0	0
Titanium	ppm	ASTM D5185m >3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	<1
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >50	<b>27</b>	15	23
Tin	ppm	ASTM D5185m >10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m	<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</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	0
Barium	ppm	ASTM D5185m 90	<b>0</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>0</b>	0	0
Calcium	ppm	ASTM D5185m 2	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m	<b>3</b>	2	<1
Zinc	ppm	ASTM D5185m	<b>0</b>	0	0

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>0</b>	0	<1
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0
Water	%	ASTM D6304 >0.05	<b>0.009</b>	0.003	0.007
ppm Water	ppm	ASTM D6304 >500	<b>91.0</b>	29.9	75.6

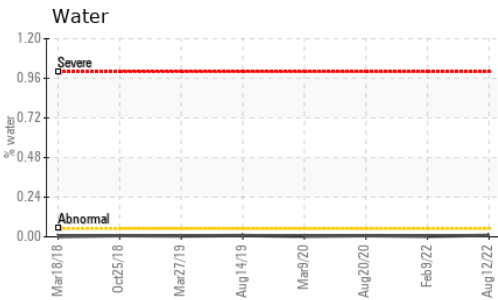
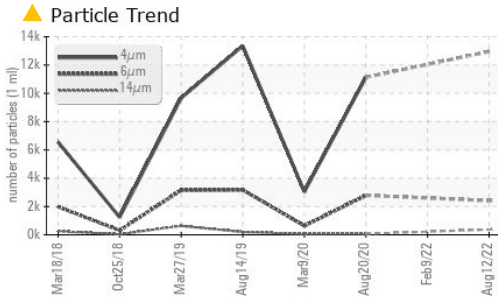
## FLUID CLEANLINESS

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647		<b>12953</b>	---	11133
Particles >6µm	ASTM D7647	>1300	<b>▲ 2415</b>	---	▲ 2788
Particles >14µm	ASTM D7647	>80	<b>▲ 373</b>	---	61
Particles >21µm	ASTM D7647	>20	<b>▲ 76</b>	---	9
Particles >38µm	ASTM D7647	>4	<b>4</b>	---	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	0
Oil Cleanliness	ISO 4406 (c)	>--/17/13	<b>▲ 21/18/16</b>	---	▲ 19/13

## FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.4	<b>0.37</b>	0.44	0.440

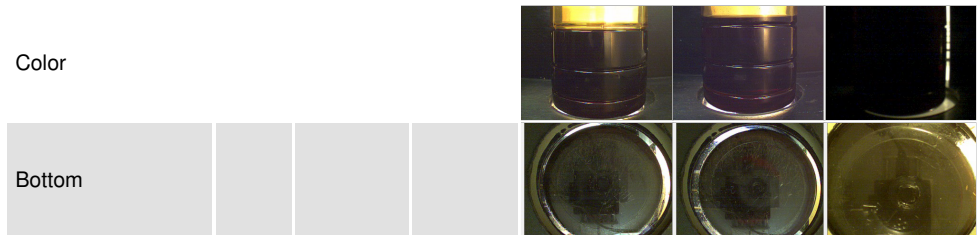
# OIL ANALYSIS REPORT



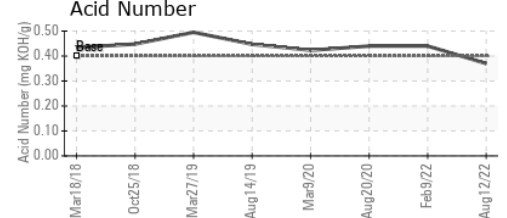
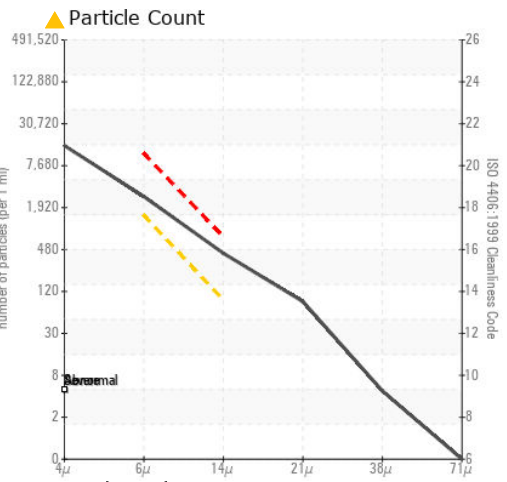
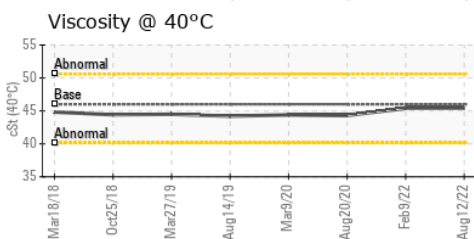
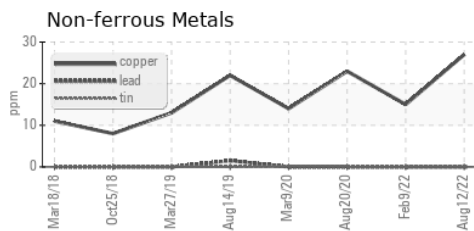
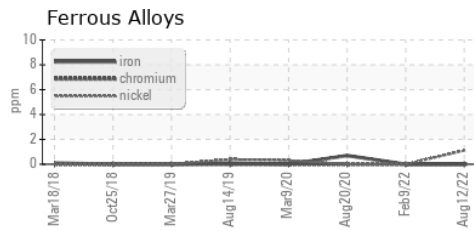
VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	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>45.4</b>	45.4

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC91317 **Received** : 19 Aug 2022  
**Lab Number** : 05621809 **Diagnosed** : 22 Aug 2022  
**Unique Number** : 10101316 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2

**PERRYMAN**  
 625 TECHNOLOGY DR  
 COAL CENTER, PA  
 USA 15423  
 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: