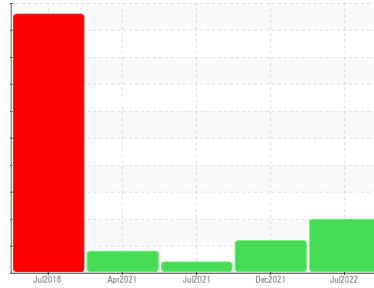


# PROBLEM SUMMARY

Sample Rating Trend



ISO



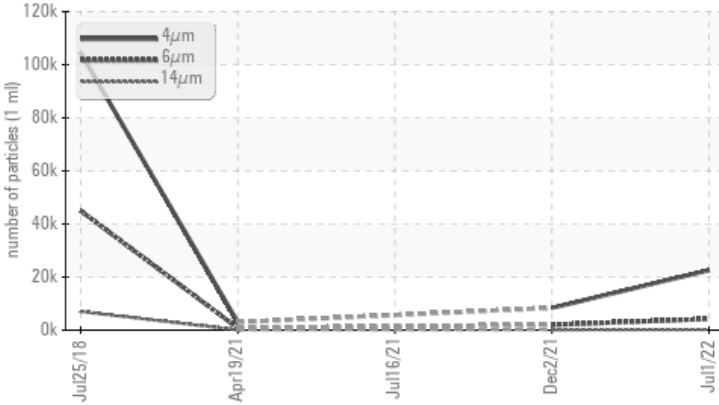
Machine Id  
**KAESER CSD 60 2474982 (S/N 1023)**

Component  
**Compressor**

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

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

Oil and 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	ASTM D7647	ABNORMAL	ATTENTION	ABNORMAL
Particles >6µm	ASTM D7647	>1300	▲ 4252	▲ 2009	---
Particles >14µm	ASTM D7647	>80	▲ 220	▲ 141	---
Particles >21µm	ASTM D7647	>20	▲ 57	▲ 40	---
Particles >38µm	ASTM D7647	>4	▲ 8	0	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 22/19/15	▲ 18/14	---

Customer Id: DARLEO  
Sample No.: KCP40541  
Lab Number: 05646599  
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

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

### 02 Dec 2021 Diag: Angela Borella

ISO



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. 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



### 16 Jul 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 suitable for further service.

view report



### 19 Apr 2021 Diag: Doug Bogart

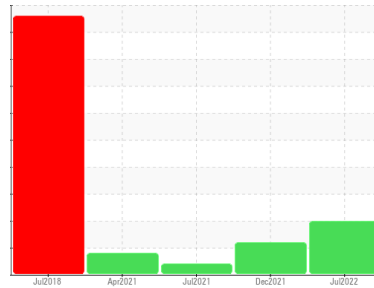
ISO



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. 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





Machine Id  
**KAESER CSD 60 2474982 (S/N 1023)**

Component  
**Compressor**

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

## DIAGNOSIS

### ▲ Recommendation

Oil and 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>KCP40541</b>	KCP39522	KC65019
Sample Date			<b>01 Jul 2022</b>	02 Dec 2021	16 Jul 2021
Machine Age	hrs		<b>56761</b>	53029	50547
Oil Age	hrs		<b>56761</b>	0	0
Oil Changed			<b>Changed</b>	Changed	Changed
Sample Status			<b>ABNORMAL</b>	ATTENTION	ABNORMAL

## WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >50	<b>&lt;1</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	0
Aluminum	ppm	ASTM D5185m >10	<b>3</b>	8	20
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >50	<b>3</b>	3	2
Tin	ppm	ASTM D5185m >10	<b>0</b>	<1	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>	2	0
Barium	ppm	ASTM D5185m	<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	<b>0</b>	<1	3
Calcium	ppm	ASTM D5185m	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m 500	<b>47</b>	191	366
Zinc	ppm	ASTM D5185m	<b>10</b>	66	177
Sulfur	ppm	ASTM D5185m	<b>3977</b>	1235	1554

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>&lt;1</b>	0	0
Sodium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Water	%	ASTM D6304 >0.05	<b>0.006</b>	0.003	0.007
ppm Water	ppm	ASTM D6304 >500	<b>61.6</b>	38.9	77.1

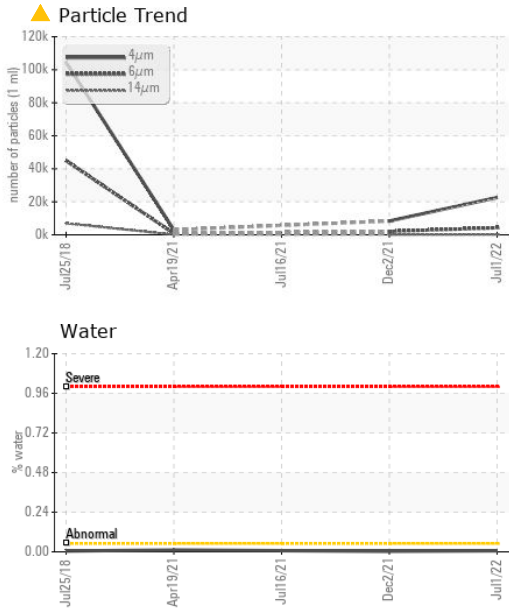
## FLUID CLEANLINESS

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647		<b>22596</b>	8366	---
Particles >6µm	ASTM D7647 >1300		<b>▲ 4252</b>	▲ 2009	---
Particles >14µm	ASTM D7647 >80		<b>▲ 220</b>	▲ 141	---
Particles >21µm	ASTM D7647 >20		<b>▲ 57</b>	▲ 40	---
Particles >38µm	ASTM D7647 >4		<b>▲ 8</b>	0	---
Particles >71µm	ASTM D7647 >3		<b>0</b>	0	---
Oil Cleanliness	ISO 4406 (c) >--/17/13		<b>▲ 22/19/15</b>	▲ 18/14	---

## FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.5	<b>0.35</b>	0.567	1.003

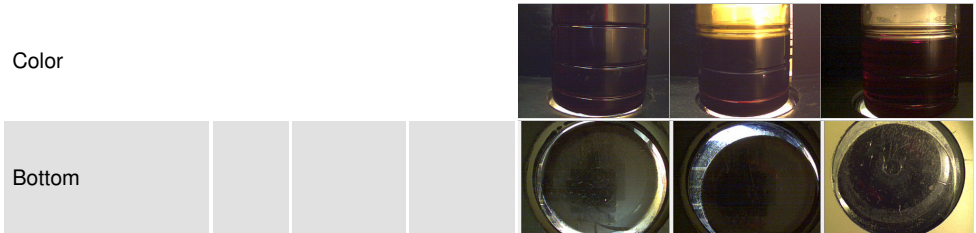
# OIL ANALYSIS REPORT



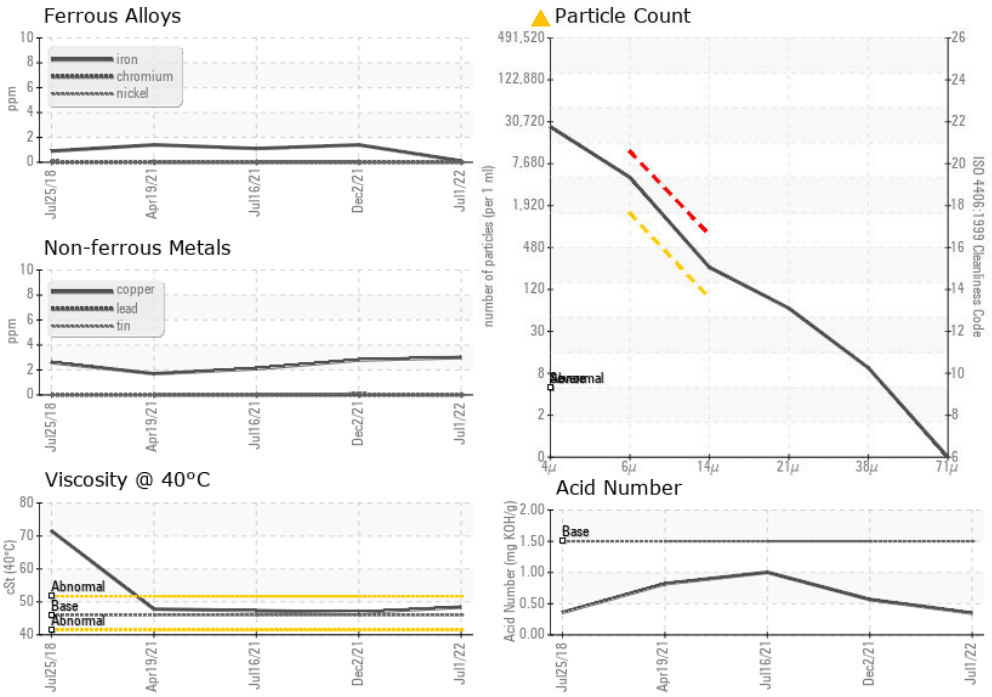
VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	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	48.4	46.8

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KCP40541 **Received** : 20 Sep 2022  
**Lab Number** : 05646599 **Diagnosed** : 22 Sep 2022  
**Unique Number** : 10141138 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**DART CONTAINER CORP**  
 60 E. MAIN ST.  
 LEOLA, PA  
 USA 17540  
 Contact: THOMAS CASEY  
 thomas.casey@dart.biz

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)