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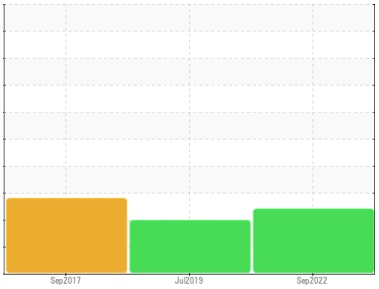
PROBLEM SUMMARY

Sample Rating Trend

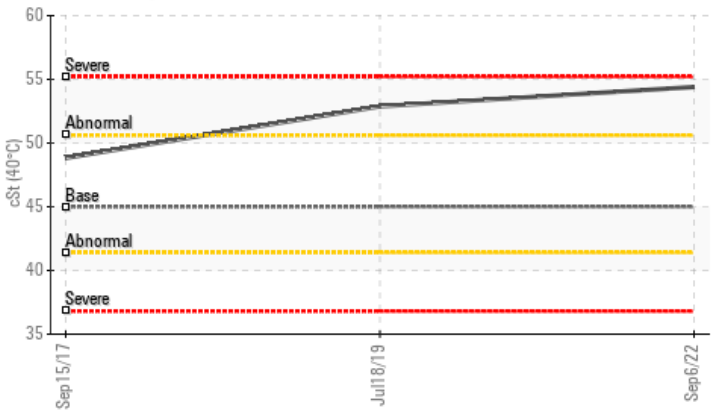


VISCOSITY

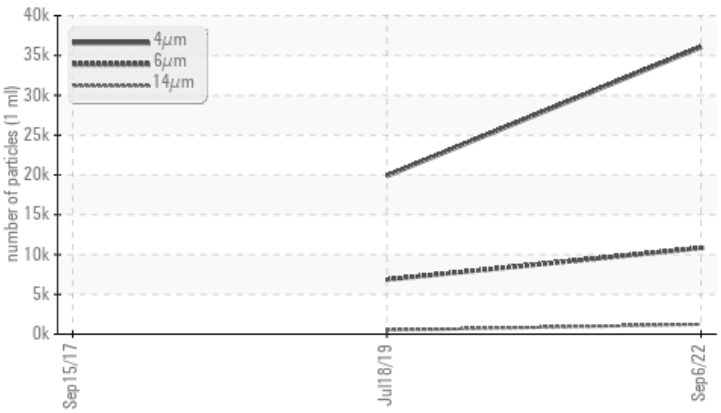
Machine Id
KAESER SM 15 5420734 (S/N 1398)
Component
Compressor
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



▲ Particle Trend



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Particles >6µm		ASTM D7647	>1300	▲ **10808**	▲ 6850	---
Particles >14µm		ASTM D7647	>80	▲ **1236**	▲ 492	---
Particles >21µm		ASTM D7647	>20	▲ **258**	▲ 131	---
Particles >38µm		ASTM D7647	>4	▲ **15**	▲ 7	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ **22/21/17**	▲ 20/16	---
Visc @ 40°C	cSt	ASTM D445	45	▲ **54.4**	▲ 52.88	48.83

Customer Id: FITGAIMD
Sample No.: KCP30992
Lab Number: 05646626
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

To change component or sample information:
Customer Service +1 1-800-237-1369
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

18 Jul 2019 Diag: Doug Bogart

VISCOSITY

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 high amount of particulates present in the oil. The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

view report

15 Sep 2017 Diag: Don Baldridge

WATER

We advise that you stop the unit and follow the water drain-off procedure for this component. The filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. 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. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid.

view report

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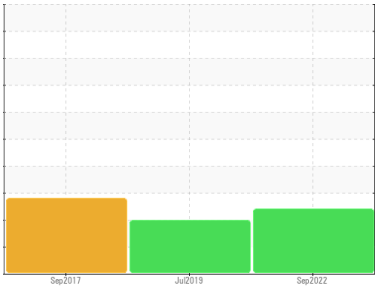
OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
KAESER SM 15 5420734 (S/N 1398)
Component
Compressor
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

▲ Recommendation
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.

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	history 1	history 2
Sample Number			**KCP30992**	KCP17079	KCP05922
Sample Date			**06 Sep 2022**	18 Jul 2019	15 Sep 2017
Machine Age	hrs		**18168**	9626	5668
Oil Age	hrs		**8542**	3958	1652
Oil Changed			**Changed**	Changed	Not Changd
Sample Status			**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>50	**0**	<1	24
Chromium	ppm	ASTM D5185m	>10	**0**	0	0
Nickel	ppm	ASTM D5185m	>3	**0**	0	<1
Titanium	ppm	ASTM D5185m	>3	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	<1	<1
Aluminum	ppm	ASTM D5185m	>10	**0**	0	<1
Lead	ppm	ASTM D5185m	>10	**0**	0	2
Copper	ppm	ASTM D5185m	>50	**6**	23	13
Tin	ppm	ASTM D5185m	>10	**0**	<1	0
Antimony	ppm	ASTM D5185m		**---**	0	2
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**0**	0	<1
Barium	ppm	ASTM D5185m	90	**0**	0	<1
Molybdenum	ppm	ASTM D5185m	0	**0**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m	100	**0**	0	17
Calcium	ppm	ASTM D5185m	0	**0**	0	0
Phosphorus	ppm	ASTM D5185m	0	**2**	4	3
Zinc	ppm	ASTM D5185m	0	**0**	0	13
Sulfur	ppm	ASTM D5185m	23500	**13970**	17316	19609

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**<1**	<1	<1
Sodium	ppm	ASTM D5185m		**0**	0	2
Potassium	ppm	ASTM D5185m	>20	**0**	0	0
Water	%	ASTM D6304	>0.05	**0.006**	0.008	▲ 0.081
ppm Water	ppm	ASTM D6304	>500	**60.8**	89.1	▲ 810

FLUID CLEANLINESS		method	limit/base	current	history 1	history 2
Particles >4µm		ASTM D7647		**36051**	19880	---
Particles >6µm		ASTM D7647	>1300	▲ **10808**	▲ 6850	---
Particles >14µm		ASTM D7647	>80	▲ **1236**	▲ 492	---
Particles >21µm		ASTM D7647	>20	▲ **258**	▲ 131	---
Particles >38µm		ASTM D7647	>4	▲ **15**	▲ 7	---
Particles >71µm		ASTM D7647	>3	**1**	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ **22/21/17**	▲ 20/16	---

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	**0.42**	0.314	0.350

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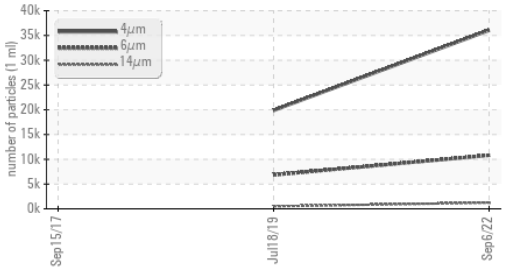
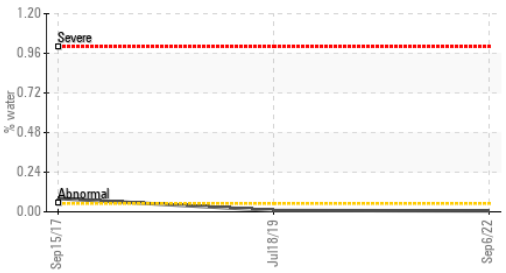
OIL ANALYSIS REPORT

▲ Particle Trend

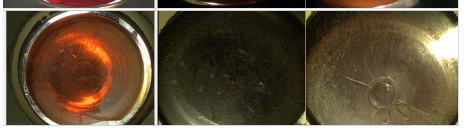


Water



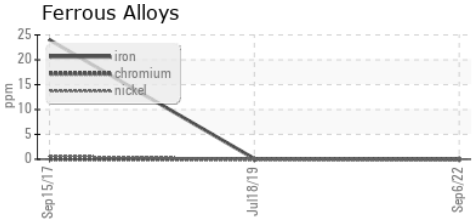
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**LIGHT**	LIGHT	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	▲ HAZY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	**NEG**	NEG	▲ 0.1%
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	45	▲ **54.4**	▲ 52.88	48.83

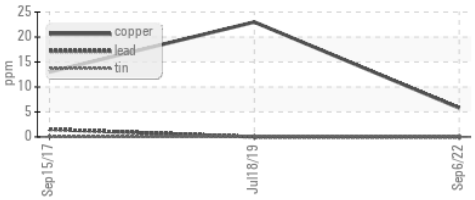
SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					

GRAPHS

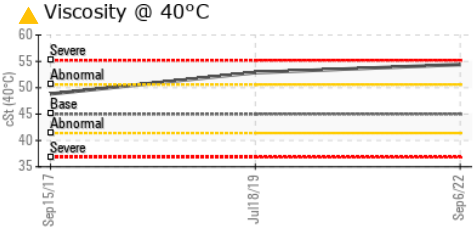
Ferrous Alloys



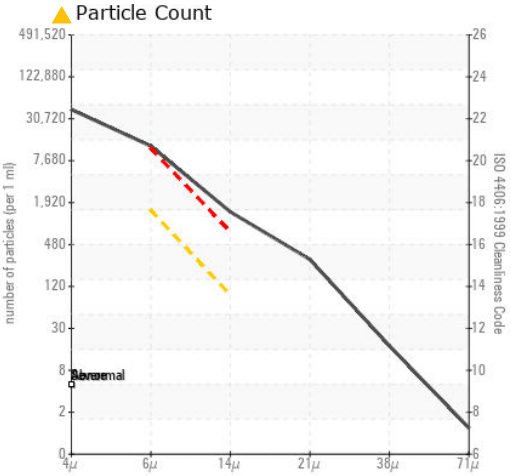
Non-ferrous Metals



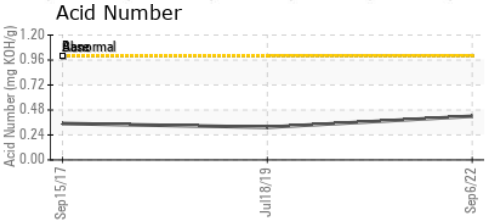
▲ Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP30992 **Received** : 20 Sep 2022
Lab Number : 05646626 **Diagnosed** : 22 Sep 2022
Unique Number : 10141165 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

FITZGERALD COLLISION CENTER
951 N FREDERICK AVE
GAITHERSBURG, MD
USA 20879
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: