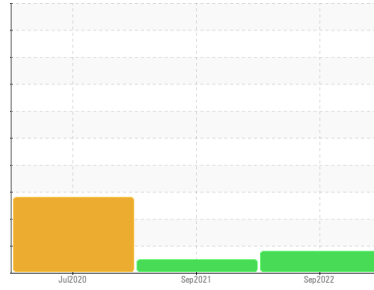


PROBLEM SUMMARY

Sample Rating Trend



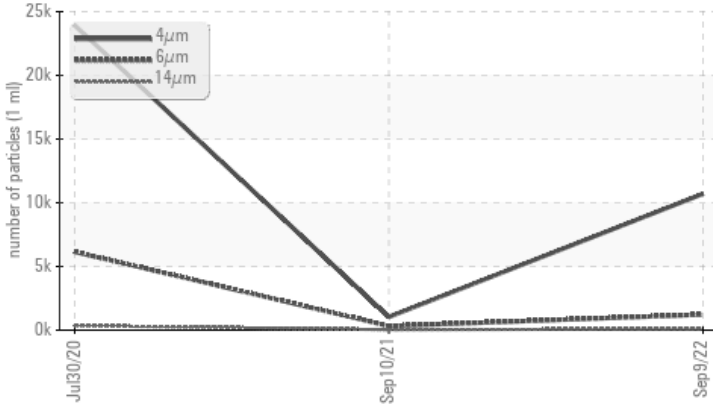
ISO



Machine Id
2645314 (S/N 1051)
Component
Compressor
Fluid
KAESER SIGMA (OEM) M-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		ATTENTION	NORMAL	ABNORMAL
Particles >14µm	ASTM D7647 >80	▲ 88	32	▲ 355
Oil Cleanliness	ISO 4406 (c) >--/17/13	▲ 21/17/14	16/12	▲ 20/16

Customer Id: HIBHIBKCP
Sample No.: KCP49406
Lab Number: 05641632
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@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

10 Sep 2021 Diag: Jonathan Hester

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. 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](#)



30 Jul 2020 Diag: Don Baldrige

WATER



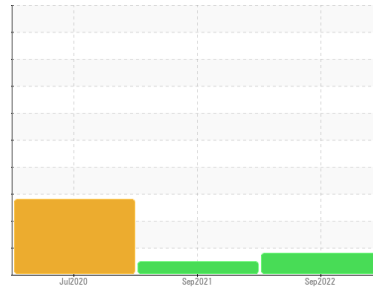
Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. All component wear rates are normal. There is a high amount of particulates present in the oil. There is a moderate concentration of water present in the oil. The AN level is acceptable for this fluid.

[view report](#)



OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
2645314 (S/N 1051)

Component
Compressor

Fluid
KAESER SIGMA (OEM) M-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 moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number			KCP49406	KCP37804	KCP10235
Sample Date			09 Sep 2022	10 Sep 2021	30 Jul 2020
Machine Age	hrs		49162	45908	43205
Oil Age	hrs		3254	2703	8247
Oil Changed			Changed	Changed	Changed
Sample Status			ATTENTION	NORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >50	<1	<1	<1
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	0	<1
Aluminum	ppm	ASTM D5185m >10	<1	<1	0
Lead	ppm	ASTM D5185m >10	0	0	0
Copper	ppm	ASTM D5185m >50	5	3	2
Tin	ppm	ASTM D5185m >10	0	<1	<1
Antimony	ppm	ASTM D5185m	---	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 0	0	<1	5
Barium	ppm	ASTM D5185m 90	<1	0	150
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 100	21	2	<1
Calcium	ppm	ASTM D5185m 0	<1	0	3
Phosphorus	ppm	ASTM D5185m 0	3	0	5
Zinc	ppm	ASTM D5185m 0	23	25	4
Sulfur	ppm	ASTM D5185m 23500	17908	15152	351

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<1	1	<1
Sodium	ppm	ASTM D5185m	15	19	30
Potassium	ppm	ASTM D5185m >20	2	0	6
Water	%	ASTM D6304 >0.05	0.008	0.048	▲ 0.570
ppm Water	ppm	ASTM D6304 >500	88.5	481.5	▲ 5708.8

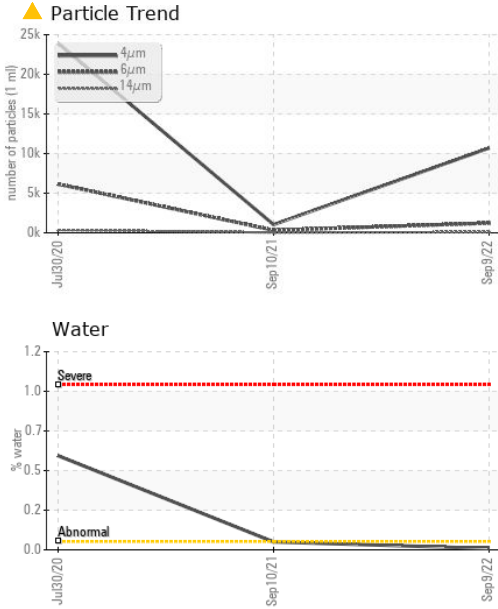
FLUID CLEANLINESS

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647		10704	1035	23924
Particles >6µm	ASTM D7647	>1300	1226	322	▲ 6148
Particles >14µm	ASTM D7647	>80	▲ 88	32	▲ 355
Particles >21µm	ASTM D7647	>20	21	11	▲ 90
Particles >38µm	ASTM D7647	>4	0	0	2
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 21/17/14	16/12	▲ 20/16

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.40	0.410	0.183

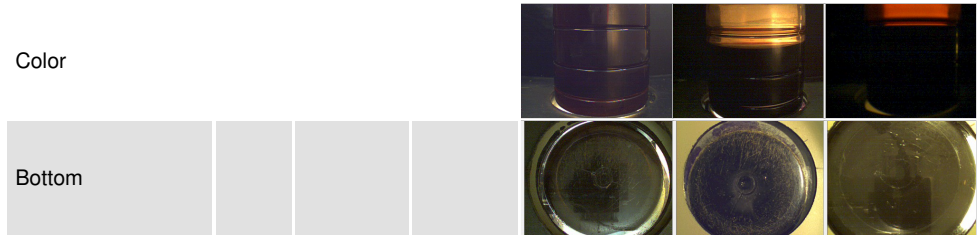
OIL ANALYSIS REPORT



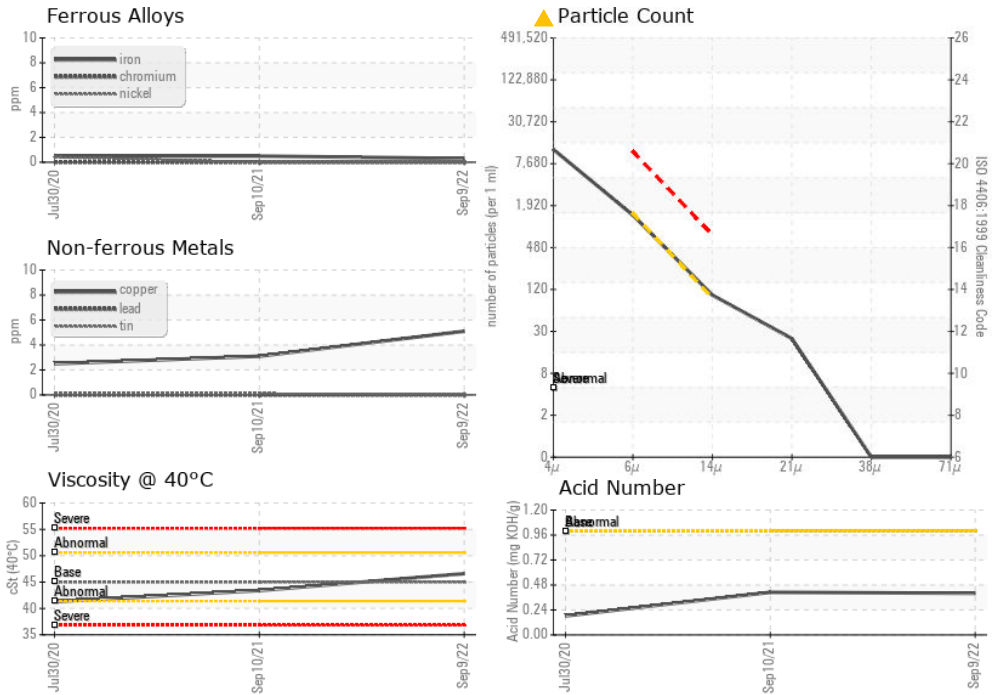
PARAMETER	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	45	46.6	43.4

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



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP49406 **Received** : 14 Sep 2022
Lab Number : 05641632 **Diagnosed** : 15 Sep 2022
Unique Number : 10131162 **Diagnostician** : Angela Borella
Test Package : IND 2 (Additional Tests: KF, PrtCount)

HIBBING FABRICATORS
 525 W 41ST ST
 HIBBING, MN
 USA 55746
 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: