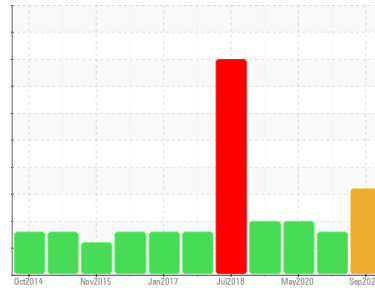


PROBLEM SUMMARY

Sample Rating Trend



WATER



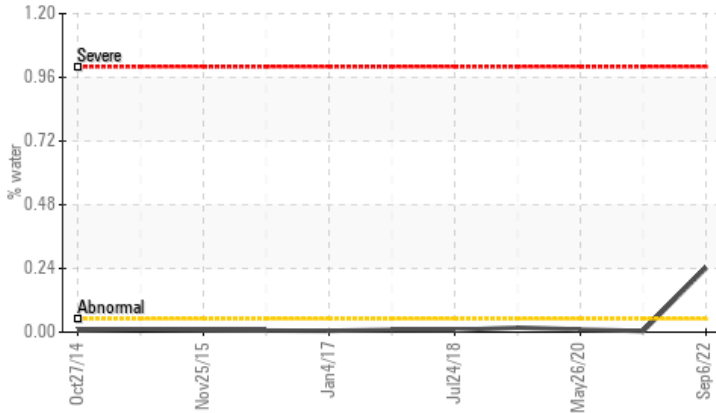
Machine Id
KAESER SM 11 2547325 (S/N 1504)

Component
Compressor

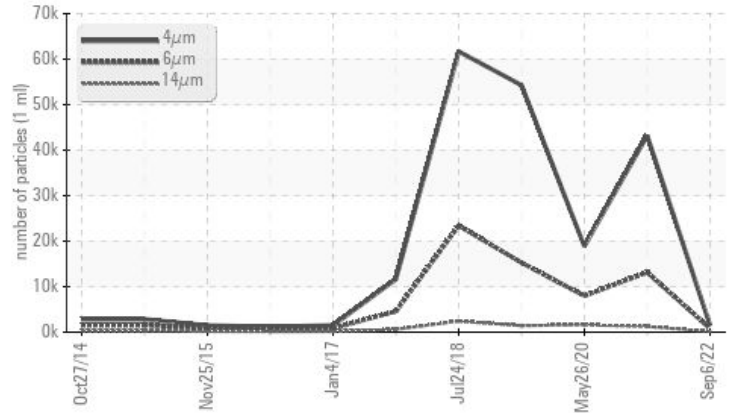
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Water



▲ Particle Trend



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Water	%	ASTM D6304	>0.05	▲ 0.242	0.004	0.010
ppm Water	ppm	ASTM D6304	>500	▲ 2420	43.4	100.6
Particles >14µm		ASTM D7647	>80	▲ 142	▲ 1230	▲ 1606
Particles >21µm		ASTM D7647	>20	▲ 48	▲ 372	▲ 571
Particles >38µm		ASTM D7647	>4	▲ 7	▲ 29	▲ 55
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ 18/17/14	▲ 21/17	▲ 20/18

Customer Id: PENFORGA
Sample No.: KCP33320
Lab Number: 05647884
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

17 Jan 2022 Diag: Don Baldrige

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 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



26 May 2020 Diag: Don Baldrige

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 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



18 Jul 2019 Diag: Jonathan Hester

ISO



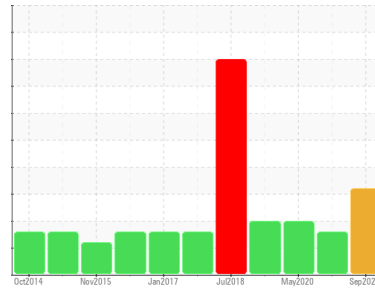
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. Moderate concentration of visible dirt/debris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

view report



OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
KAESER SM 11 2547325 (S/N 1504)

Component
Compressor
Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a moderate amount of particulates present in the oil. There is a light concentration of water 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			KCP33320	KCP48608	KCP25077
Sample Date			06 Sep 2022	17 Jan 2022	26 May 2020
Machine Age	hrs		69825	66975	58896
Oil Age	hrs		0	3200	3800
Oil Changed			Changed	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >50	<1	0	<1
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m >3	0	0	0
Titanium	ppm	ASTM D5185m >3	0	0	0
Silver	ppm	ASTM D5185m >2	<1	<1	0
Aluminum	ppm	ASTM D5185m >10	0	0	0
Lead	ppm	ASTM D5185m >10	0	0	0
Copper	ppm	ASTM D5185m >50	7	10	11
Tin	ppm	ASTM D5185m >10	0	0	0
Antimony	ppm	ASTM D5185m	---	<1	0
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	0
Barium	ppm	ASTM D5185m 90	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	<1
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 100	<1	<1	0
Calcium	ppm	ASTM D5185m 0	0	0	0
Phosphorus	ppm	ASTM D5185m 0	1	5	<1
Zinc	ppm	ASTM D5185m 0	7	0	8
Sulfur	ppm	ASTM D5185m 23500	21678	15878	18116

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<1	<1	<1
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	<1	<1	0
Water	%	ASTM D6304 >0.05	▲ 0.242	0.004	0.010
ppm Water	ppm	ASTM D6304 >500	▲ 2420	43.4	100.6

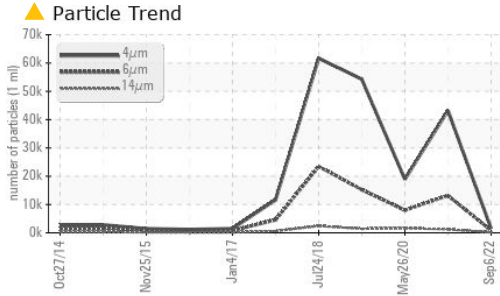
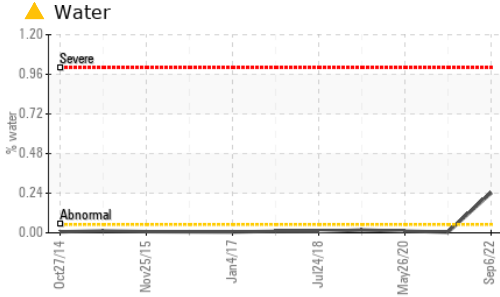
FLUID CLEANLINESS

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647		1529	43192	18901
Particles >6µm	ASTM D7647	>1300	833	▲ 13156	▲ 7986
Particles >14µm	ASTM D7647	>80	▲ 142	▲ 1230	▲ 1606
Particles >21µm	ASTM D7647	>20	▲ 48	▲ 372	▲ 571
Particles >38µm	ASTM D7647	>4	▲ 7	▲ 29	▲ 55
Particles >71µm	ASTM D7647	>3	1	1	▲ 4
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 18/17/14	▲ 21/17	▲ 20/18

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.46	0.46	0.435

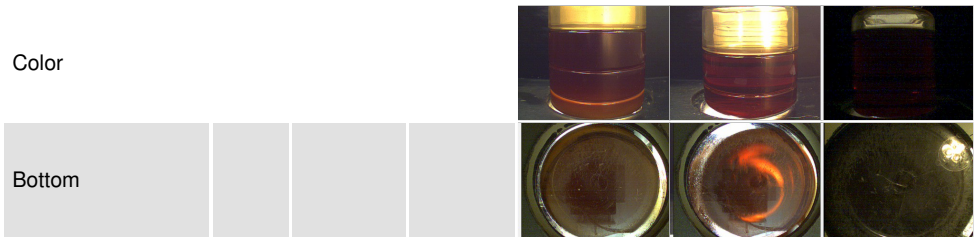
OIL ANALYSIS REPORT



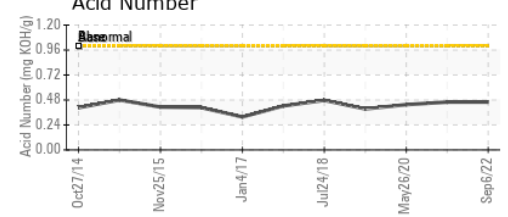
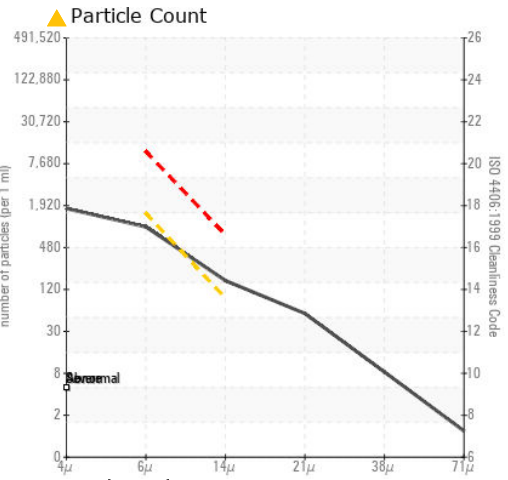
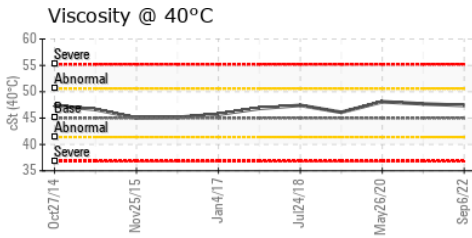
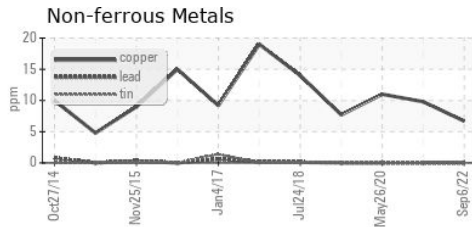
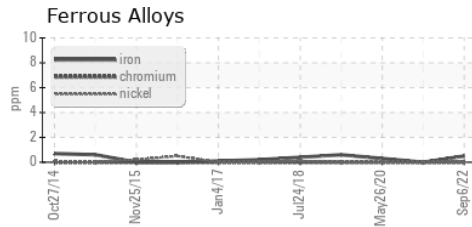
VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	0.2%	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	45	47.4	47.7

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



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP33320 **Received** : 21 Sep 2022
Lab Number : 05647884 **Diagnosed** : 26 Sep 2022
Unique Number : 10142423 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

PENSKE
 291 THIRD ST
 FOREST PARK, GA
 USA 30297
 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: