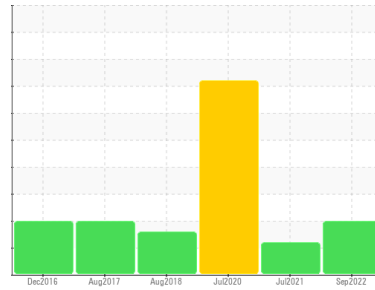


PROBLEM SUMMARY

Sample Rating Trend



WATER



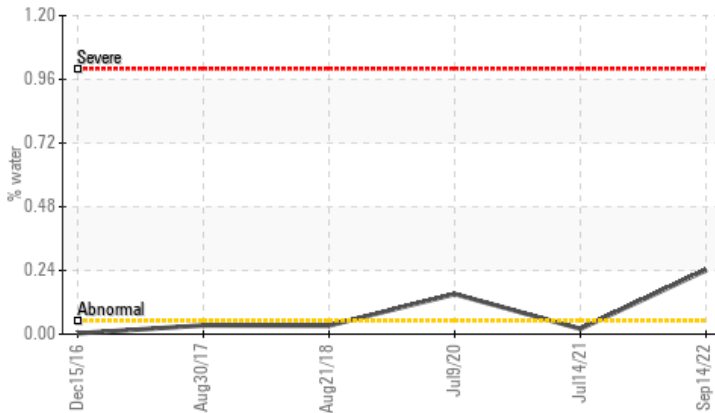
Machine Id
KAESER AS 20 4924821 (S/N 1220)

Component
Compressor

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

COMPONENT CONDITION SUMMARY

▲ Water



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We recommend an early resample in 500 hours to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	SEVERE
Water	%	ASTM D6304	>0.05	▲ 0.241	0.020	▲ 0.151
ppm Water	ppm	ASTM D6304	>500	▲ 2410	202.4	▲ 1510
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	NONE

Customer Id: GROCUB
Sample No.: KCP33206
Lab Number: 05646593
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.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

14 Jul 2021 Diag: Angela Borella

ISO



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



09 Jul 2020 Diag: Angela Borella

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. 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. There is a light concentration of water present in the oil. Free water present. There is a moderate amount of visible silt present in the sample. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



21 Aug 2018 Diag: Angela Borella

ISO



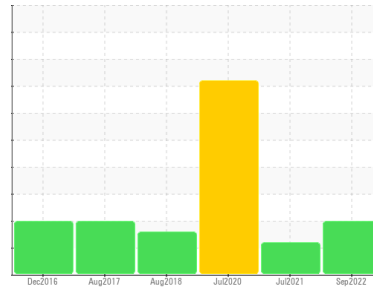
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



Machine Id
KAESER AS 20 4924821 (S/N 1220)

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



DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We recommend an early resample in 500 hours to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris 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			KCP33206	KCP41659	KCP10548
Sample Date			14 Sep 2022	14 Jul 2021	09 Jul 2020
Machine Age	hrs		27230	23992	20529
Oil Age	hrs		3000	3000	3000
Oil Changed			Changed	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	SEVERE

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	0
Titanium	ppm ASTM D5185m	>3	0	0	0
Silver	ppm ASTM D5185m	>2	0	0	0
Aluminum	ppm ASTM D5185m	>10	<1	<1	<1
Lead	ppm ASTM D5185m	>10	0	<1	<1
Copper	ppm ASTM D5185m	>50	7	4	7
Tin	ppm ASTM D5185m	>10	0	<1	0
Antimony	ppm ASTM D5185m		---	0	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	13	2
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	14	27	30
Calcium	ppm ASTM D5185m	0	0	0	2
Phosphorus	ppm ASTM D5185m	0	2	8	9
Zinc	ppm ASTM D5185m	0	14	9	12
Sulfur	ppm ASTM D5185m	23500	21643	19937	17076

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m	>25	<1	0	4
Sodium	ppm ASTM D5185m		7	12	17
Potassium	ppm ASTM D5185m	>20	0	2	2
Water	% ASTM D6304	>0.05	▲ 0.241	0.020	▲ 0.151
ppm Water	ppm ASTM D6304	>500	▲ 2410	202.4	▲ 1510

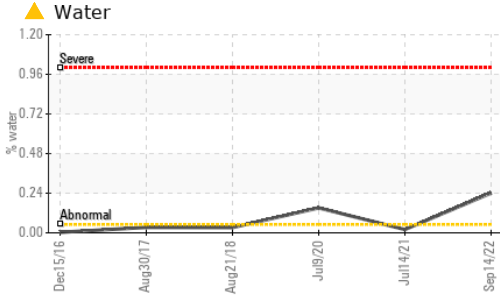
FLUID CLEANLINESS

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647		---	7863	---
Particles >6µm	ASTM D7647	>1300	---	▲ 3385	---
Particles >14µm	ASTM D7647	>80	---	▲ 558	---
Particles >21µm	ASTM D7647	>20	---	▲ 151	---
Particles >38µm	ASTM D7647	>4	---	4	---
Particles >71µm	ASTM D7647	>3	---	0	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	---	▲ 19/16	---

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g ASTM D8045	1.0	0.44	0.399	0.352

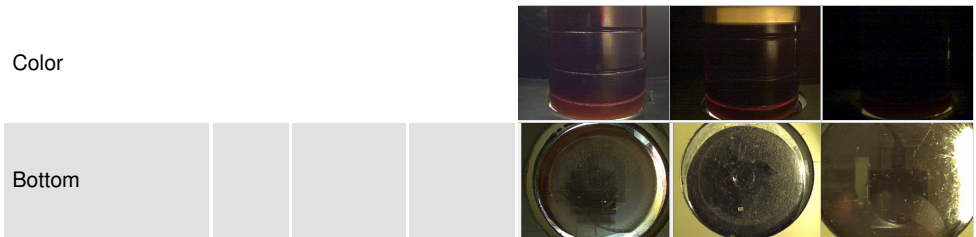
OIL ANALYSIS REPORT



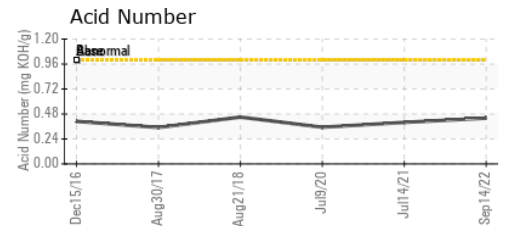
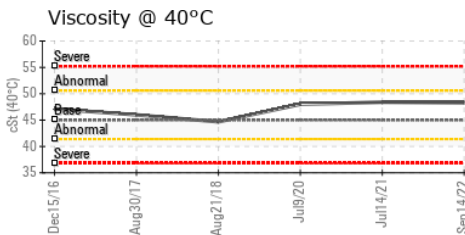
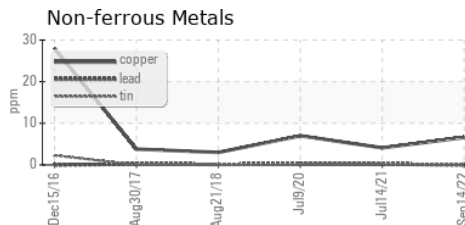
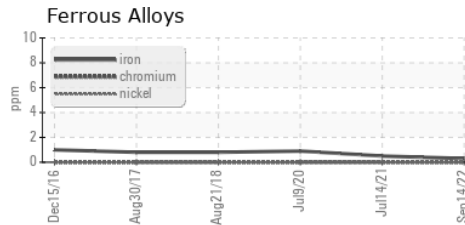
VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	▲ MODER
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	2.0

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	45	48.3	48.4

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. : KCP33206 **Received** : 20 Sep 2022
Lab Number : 05646593 **Diagnosed** : 22 Sep 2022
Unique Number : 10141132 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

GROW ALLIANCE
 613 N RANDOLPH ST
 CUBA CITY, WI
 USA 53807
 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: