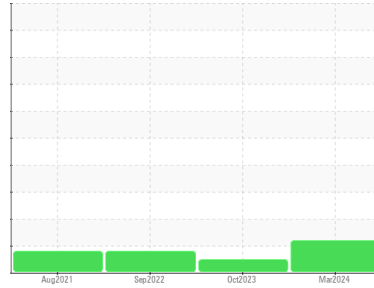




OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Machine Id
KAESER 6767668

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 moderate 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	history1	history2
Sample Number	Client Info			KCPA014948	KCPA009488	KCP41316
Sample Date	Client Info			11 Mar 2024	30 Oct 2023	01 Sep 2022
Machine Age	hrs	Client Info		11207	9198	8129
Oil Age	hrs	Client Info		2009	0	2919
Oil Changed	Client Info			Changed	N/A	Changed
Sample Status				ATTENTION	NORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	0	<1
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>10	0	2	<1
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>50	1	4	19
Tin	ppm	ASTM D5185m	>10	<1	0	0
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	90	62	10	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m	100	81	61	9
Calcium	ppm	ASTM D5185m	0	2	1	0
Phosphorus	ppm	ASTM D5185m	0	0	0	2
Zinc	ppm	ASTM D5185m	0	0	<1	8
Sulfur	ppm	ASTM D5185m	23500	22307	20866	18158

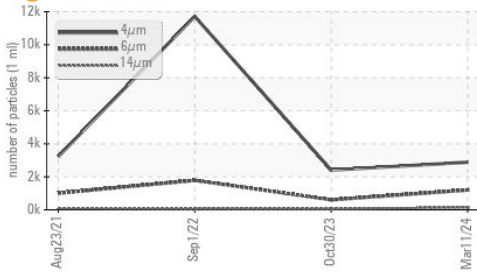
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	<1	1
Sodium	ppm	ASTM D5185m		11	15	3
Potassium	ppm	ASTM D5185m	>20	0	3	0
Water	%	ASTM D6304	>0.05	0.012	0.021	0.005
ppm Water	ppm	ASTM D6304	>500	130	212.6	59.6

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		2884	2407	11715
Particles >6µm		ASTM D7647	>1300	1201	604	1784
Particles >14µm		ASTM D7647	>80	143	46	55
Particles >21µm		ASTM D7647	>20	32	11	14
Particles >38µm		ASTM D7647	>4	1	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	19/17/14	18/16/13	21/18/13

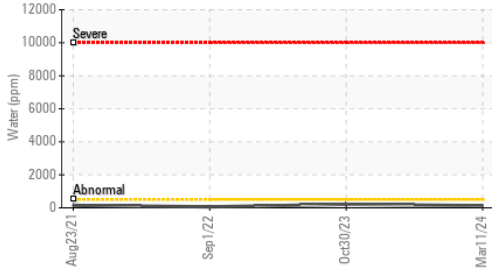
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.34	0.39	0.39

OIL ANALYSIS REPORT

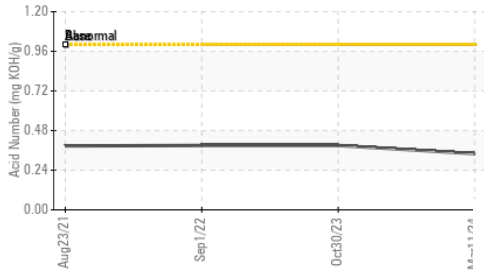
Particle Trend



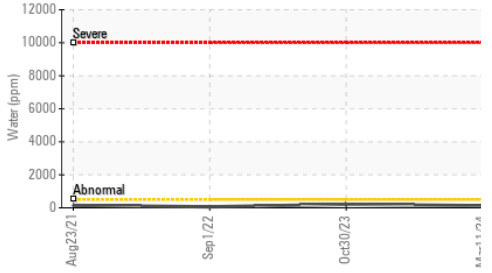
Water (KF)



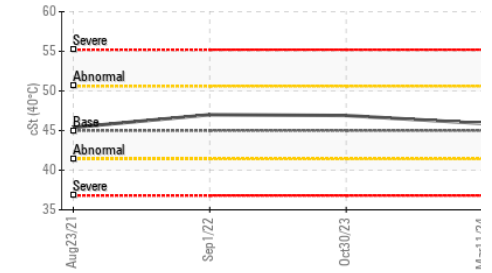
Acid Number



Water (KF)



Viscosity @ 40°C



VISUAL	method	limit/base	current	history1	history2
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	LIGHT	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	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

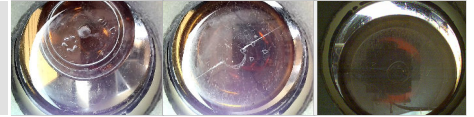
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 45	45.9	46.9	47.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

Color

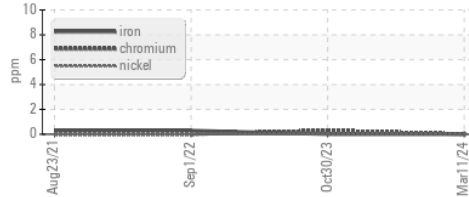


Bottom

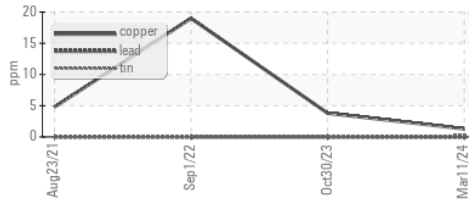


GRAPHS

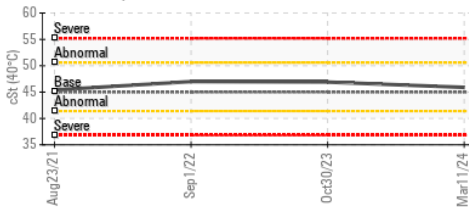
Ferrous Alloys



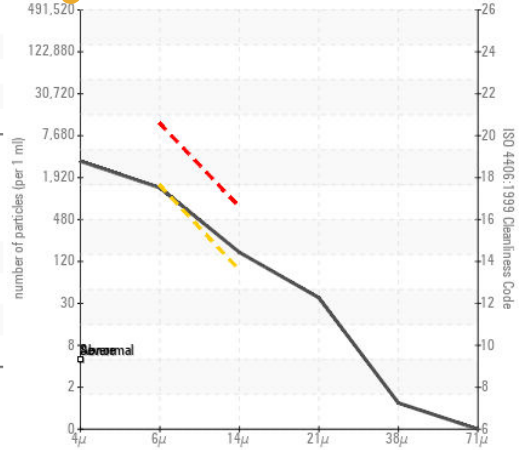
Non-ferrous Metals



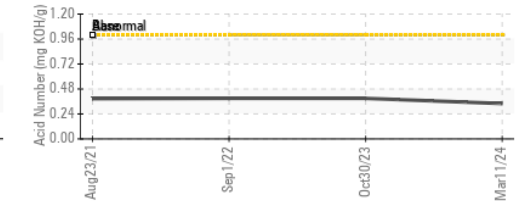
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : KCPA014948

Lab Number : 06123646

Unique Number : 10937797

Test Package : IND 2 (Additional Tests: KF, PrtCount)

Received : 20 Mar 2024

Tested : 25 Mar 2024

Diagnosed : 25 Mar 2024 - Jonathan Hester

KROGER

1933 TOWER RD

AURORA, CO

US 80011

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: