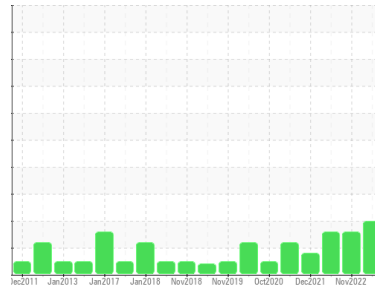


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER 4163626 (S/N 1004)

Component
Compressor

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The 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 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		KCPA013805	KCP40316D	KCP49628
Sample Date	Client Info		15 Mar 2024	01 Nov 2022	21 Jun 2022
Machine Age	hrs	Client Info	105549	94295	91222
Oil Age	hrs	Client Info	4548	3000	7998
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	0	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	0	0	0
Aluminum	ppm	ASTM D5185m >10	0	0	4
Lead	ppm	ASTM D5185m >10	0	0	0
Copper	ppm	ASTM D5185m >50	8	6	7
Tin	ppm	ASTM D5185m >10	0	0	<1
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	1
Barium	ppm	ASTM D5185m 90	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m 90	<1	10	9
Calcium	ppm	ASTM D5185m 2	0	0	4
Phosphorus	ppm	ASTM D5185m	0	3	5
Zinc	ppm	ASTM D5185m	0	2	24
Sulfur	ppm	ASTM D5185m	19833	21217	19361

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	0	<1	<1
Sodium	ppm	ASTM D5185m	1	<1	3
Potassium	ppm	ASTM D5185m >20	0	0	1
Water	%	ASTM D6304 >0.05	0.003	0.012	0.012
ppm Water	ppm	ASTM D6304 >500	39	123.0	120.0

FLUID CLEANLINESS

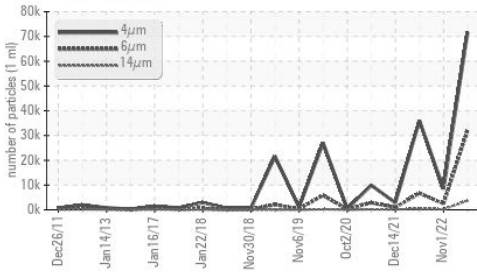
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		71601	8560	36013
Particles >6µm	ASTM D7647	>1300	▲ 32297	▲ 2466	▲ 6686
Particles >14µm	ASTM D7647	>80	▲ 3703	▲ 212	▲ 324
Particles >21µm	ASTM D7647	>20	▲ 975	▲ 45	▲ 80
Particles >38µm	ASTM D7647	>4	▲ 31	4	3
Particles >71µm	ASTM D7647	>3	2	1	0
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 23/22/19	▲ 20/18/15	▲ 22/20/16

FLUID DEGRADATION

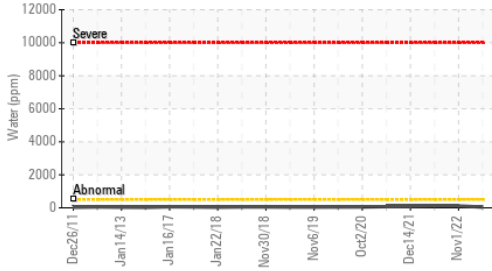
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.4	0.45	0.45	0.46

OIL ANALYSIS REPORT

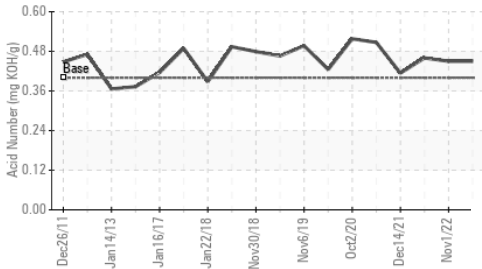
▲ Particle Trend



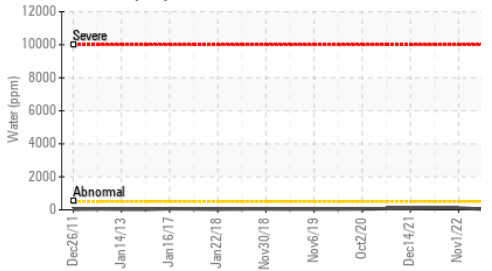
Water (KF)



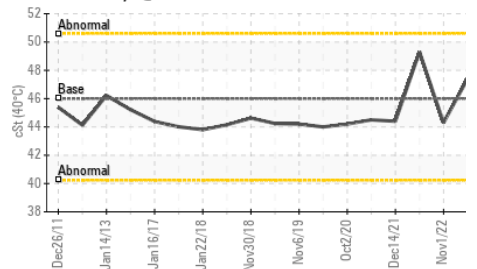
Acid Number



Water (KF)



Viscosity @ 40°C

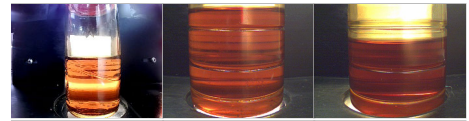


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

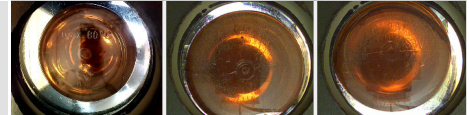
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	47.4	44.3	49.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

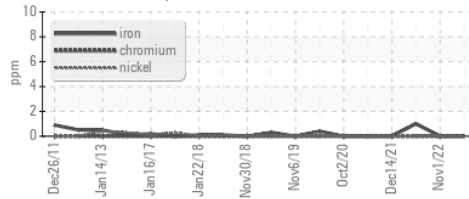


Bottom

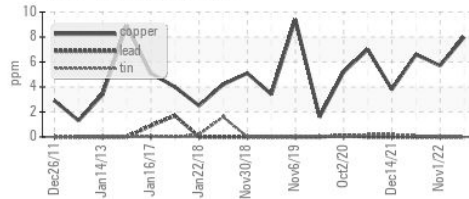


GRAPHS

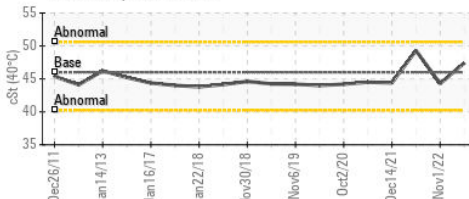
Ferrous Alloys



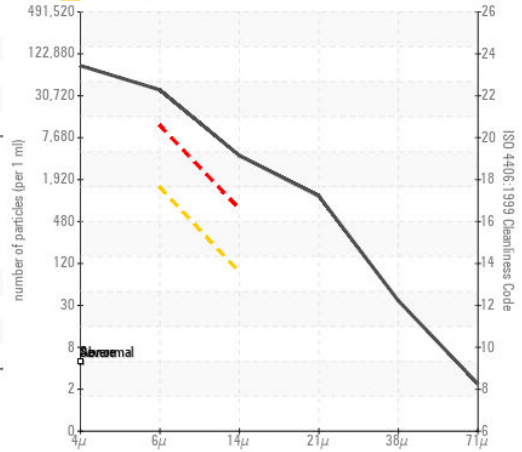
Non-ferrous Metals



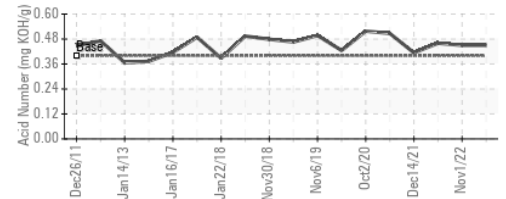
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

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

Sample No. : KCPA013805

Lab Number : 06125669

Unique Number : 10939820

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

Received : 21 Mar 2024

Tested : 25 Mar 2024

Diagnosed : 25 Mar 2024 - Don Baldrige

TURN KEY TOOL & DIE INC

8 PROGRESS PKWY

UNION, MO

US 63084

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: