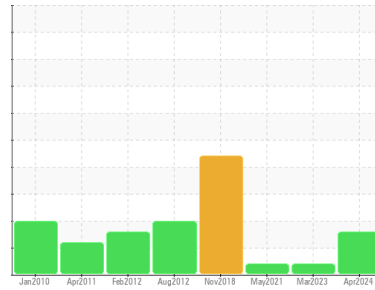




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER ASD 30 3478342 (S/N 1478)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KCPA015929	KCP55899	KCP32807
Sample Date	Client Info		01 Apr 2024	03 Mar 2023	27 May 2021
Machine Age	hrs	Client Info	42234	39320	33278
Oil Age	hrs	Client Info	3500	3000	3000
Oil Changed	Client Info		Not Chngd	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<1	1	0
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m >3	<1	0	<1
Titanium	ppm	ASTM D5185m >3	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >10	1	<1	<1
Lead	ppm	ASTM D5185m >10	1	0	<1
Copper	ppm	ASTM D5185m >50	11	25	22
Tin	ppm	ASTM D5185m >10	1	0	<1
Antimony	ppm	ASTM D5185m	---	---	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	11
Barium	ppm	ASTM D5185m 90	2	<1	0
Molybdenum	ppm	ASTM D5185m	1	0	0
Manganese	ppm	ASTM D5185m	<1	0	0
Magnesium	ppm	ASTM D5185m 90	36	15	6
Calcium	ppm	ASTM D5185m 2	5	0	0
Phosphorus	ppm	ASTM D5185m	3	2	12
Zinc	ppm	ASTM D5185m	57	71	34
Sulfur	ppm	ASTM D5185m	20486	16484	15355

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	0	<1	<1
Sodium	ppm	ASTM D5185m	30	14	7
Potassium	ppm	ASTM D5185m >20	5	2	<1
Water	%	ASTM D6304 >0.05	0.006	0.011	0.013
ppm Water	ppm	ASTM D6304 >500	65	117.0	135.0

FLUID CLEANLINESS

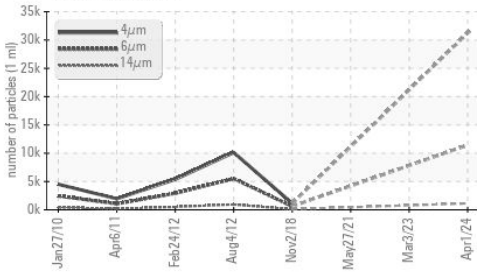
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		31220	---	---
Particles >6µm	ASTM D7647	>1300	▲ 11436	---	---
Particles >14µm	ASTM D7647	>80	▲ 1124	---	---
Particles >21µm	ASTM D7647	>20	▲ 222	---	---
Particles >38µm	ASTM D7647	>4	4	---	---
Particles >71µm	ASTM D7647	>3	0	---	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 22/21/17	---	---

FLUID DEGRADATION

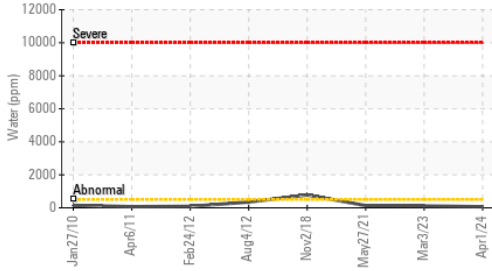
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.4	0.38	0.38	0.379

OIL ANALYSIS REPORT

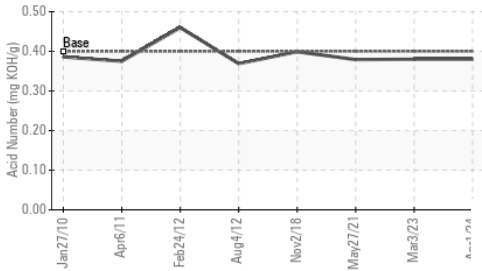
▲ Particle Trend



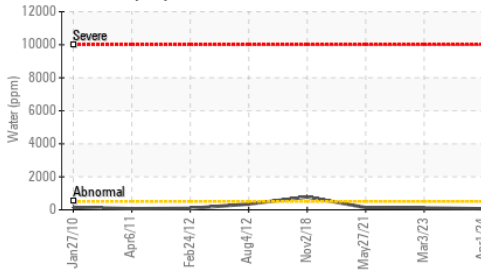
Water (KF)



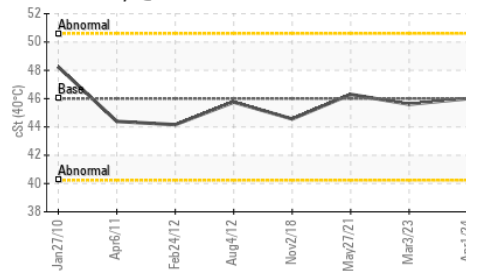
Acid Number



Water (KF)



Viscosity @ 40°C

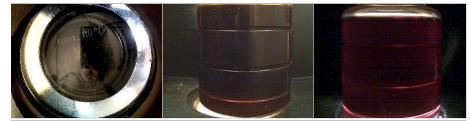


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	46.0	45.6	46.3

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

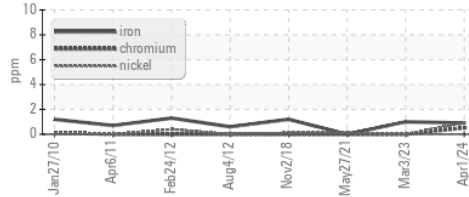


Bottom

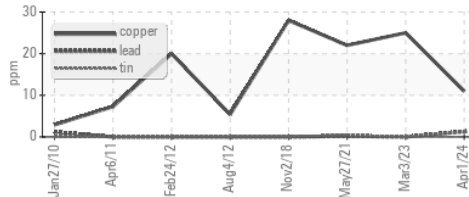


GRAPHS

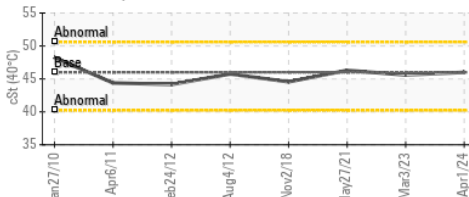
Ferrous Alloys



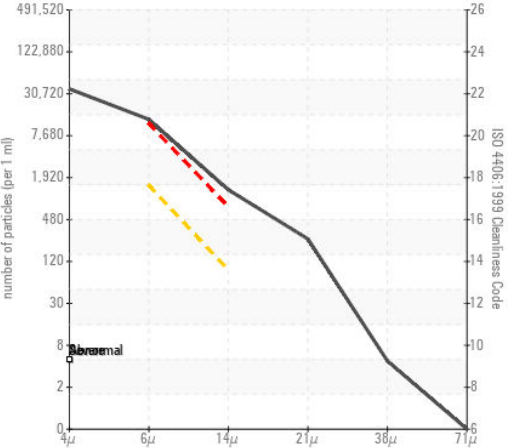
Non-ferrous Metals



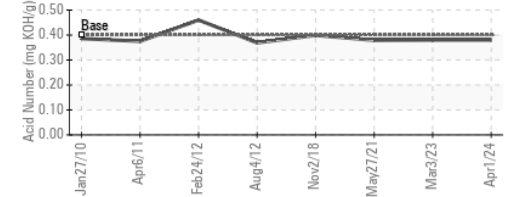
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

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

Sample No. : KCPA015929

Lab Number : 06146594

Unique Number : 10976672

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

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)

Received : 11 Apr 2024

Tested : 12 Apr 2024

Diagnosed : 15 Apr 2024 - Angela Borella

CARGILL SALT

1835 S. CARFERRY DR.

MILWAUKEE, WI

US 53207

Contact: ROY PELLAND

roy_pelland@cargill.com

T:

F: