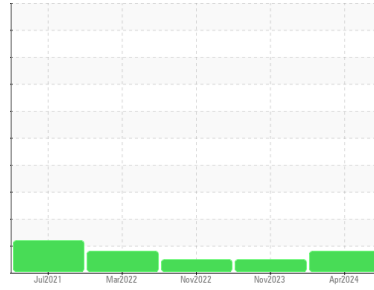




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
KAESER CSD 100S 6649381 (S/N 1253)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. All other component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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			KCPA016515	KCPA006973	KCP47607
Sample Date	Client Info			24 Apr 2024	08 Nov 2023	10 Nov 2022
Machine Age	hrs	Client Info		15953	13938	11893
Oil Age	hrs	Client Info		4892	0	842
Oil Changed	Client Info			Changed	N/A	Not Chngd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	<1	1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>3	0	0	1
Titanium	ppm	ASTM D5185m	>3	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	1	5
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>50	▲ 61	33	23
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

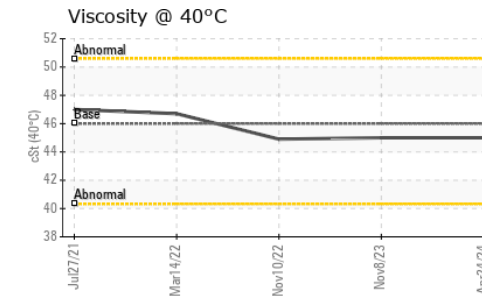
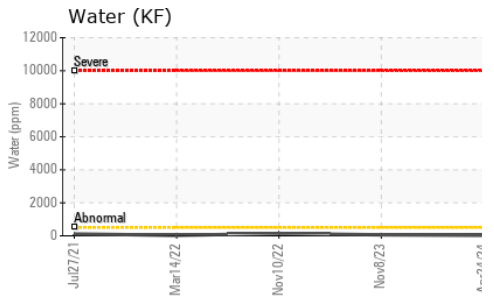
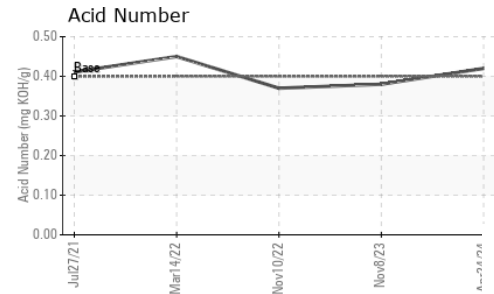
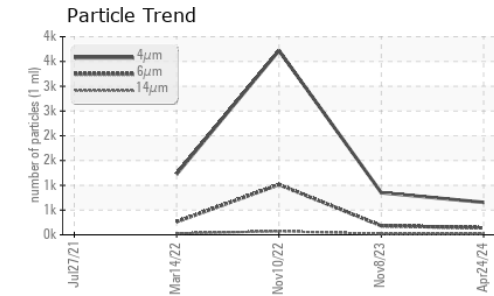
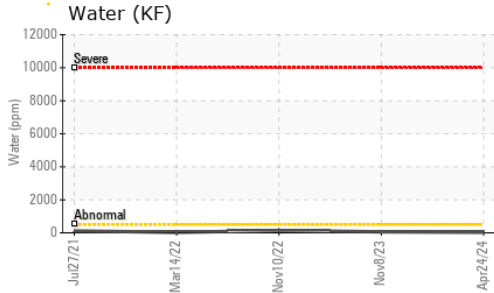
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m	90	1	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	90	2	<1	39
Calcium	ppm	ASTM D5185m	2	0	0	0
Phosphorus	ppm	ASTM D5185m		0	15	8
Zinc	ppm	ASTM D5185m		132	137	161
Sulfur	ppm	ASTM D5185m		20353	19933	21922

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	0	<1
Sodium	ppm	ASTM D5185m		1	0	9
Potassium	ppm	ASTM D5185m	>20	0	1	6
Water	%	ASTM D6304	>0.05	0.003	0.005	0.014
ppm Water	ppm	ASTM D6304	>500	26	59	144.9

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		655	850	3720
Particles >6µm		ASTM D7647	>1300	140	182	1014
Particles >14µm		ASTM D7647	>80	19	17	72
Particles >21µm		ASTM D7647	>20	8	6	22
Particles >38µm		ASTM D7647	>4	1	0	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	17/14/11	17/15/11	19/17/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.42	0.38	0.37

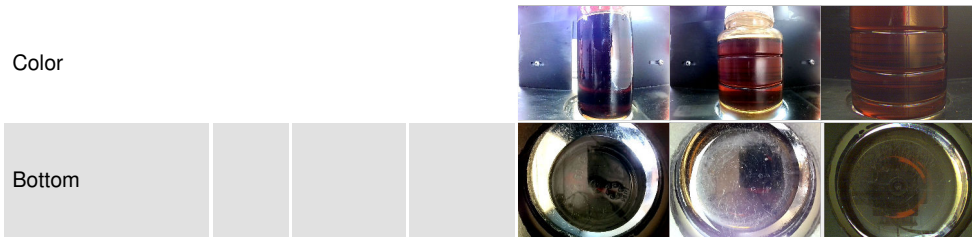
OIL ANALYSIS REPORT



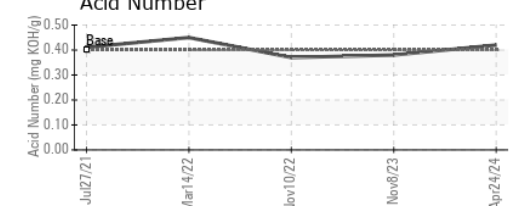
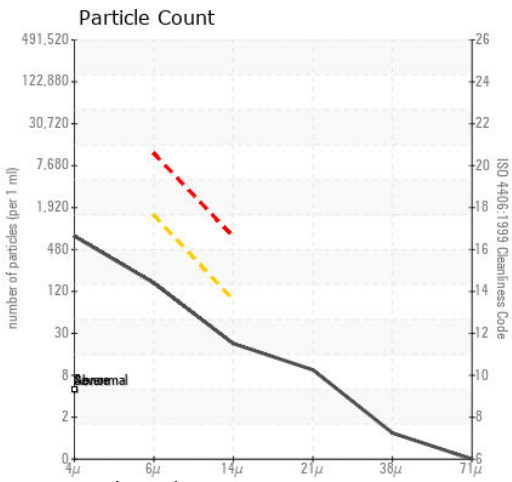
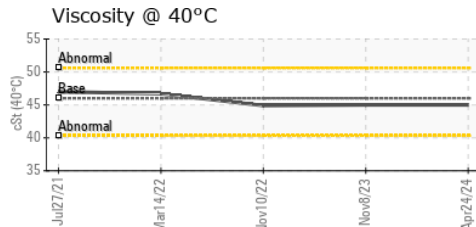
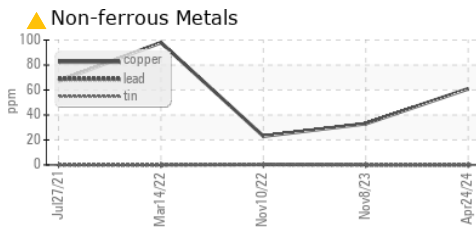
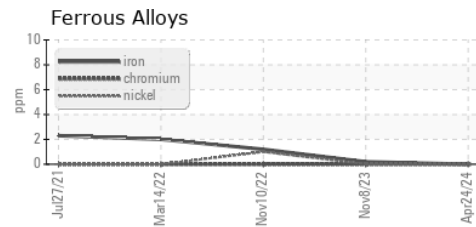
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	45.0	45.0	44.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA016515 **Received** : 10 May 2024
Lab Number : 06176106 **Tested** : 14 May 2024
Unique Number : 11022159 **Diagnosed** : 14 May 2024 - Doug Bogart
Test Package : IND 2 (Additional Tests: KF, PrtCount)

LONZA INC - INNOVATIVE WATER CARE
 1400 BLUEGRASS LAKES PKWY
 ALPHARETTA, GA
 US 30004
 Contact: J. STILES
 jstiles@contractor.solenis.com

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)