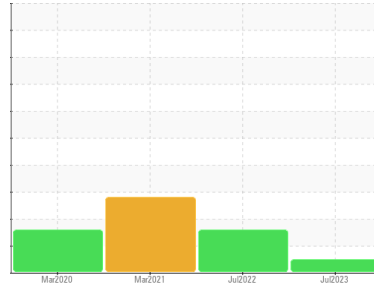




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
KAESER 2984590 (S/N 1024)

Component
Compressor

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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			KCPA004424	KCP51477	KC73167
Sample Date	Client Info			21 Jul 2023	05 Jul 2022	09 Mar 2021
Machine Age	hrs	Client Info		6742	6423	5981
Oil Age	hrs	Client Info		0	442	659
Oil Changed	Client Info			N/A	Changed	Not Chngd
Sample Status				NORMAL	ABNORMAL	ABNORMAL

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

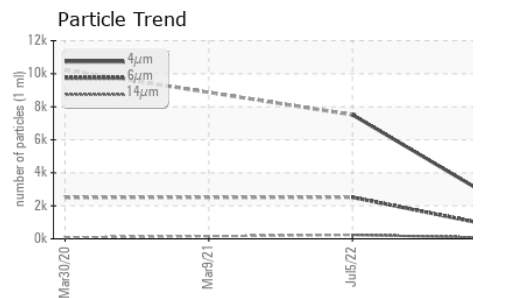
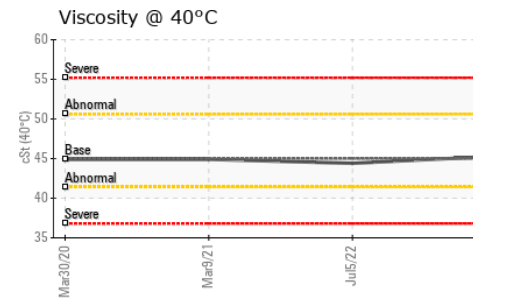
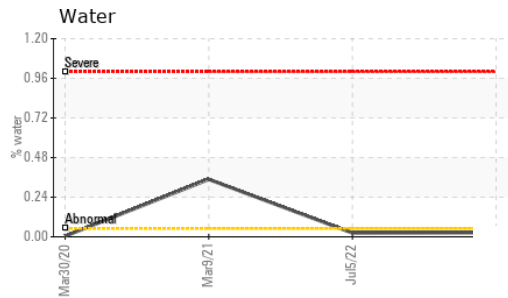
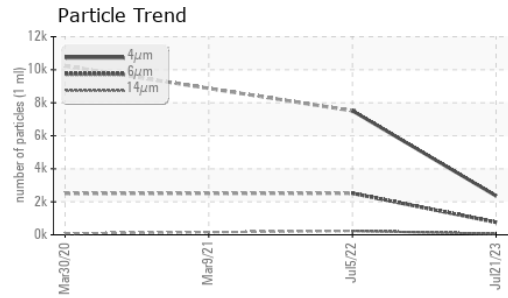
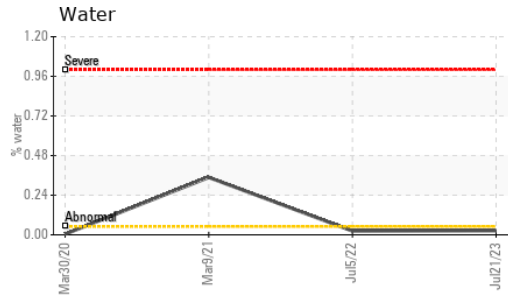
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	10
Barium	ppm	ASTM D5185m	90	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	100	54	39	32
Calcium	ppm	ASTM D5185m	0	0	0	0
Phosphorus	ppm	ASTM D5185m	0	3	12	4
Zinc	ppm	ASTM D5185m	0	4	24	22
Sulfur	ppm	ASTM D5185m	23500	17798	22454	15829

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	1	4	2
Sodium	ppm	ASTM D5185m		10	7	6
Potassium	ppm	ASTM D5185m	>20	1	2	<1
Water	%	ASTM D6304	>0.05	0.025	0.023	▲ 0.348
ppm Water	ppm	ASTM D6304	>500	256.1	236.3	▲ 3480

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		2357	7514	---
Particles >6µm		ASTM D7647	>1300	759	▲ 2518	---
Particles >14µm		ASTM D7647	>80	63	▲ 234	---
Particles >21µm		ASTM D7647	>20	14	▲ 41	---
Particles >38µm		ASTM D7647	>4	0	2	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	18/17/13	▲ 20/19/15	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.36	0.39	0.397

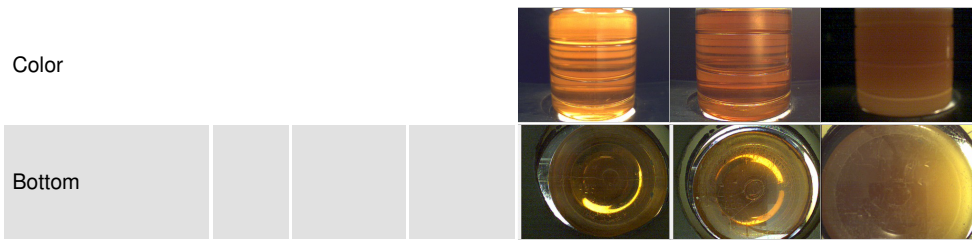
OIL ANALYSIS REPORT



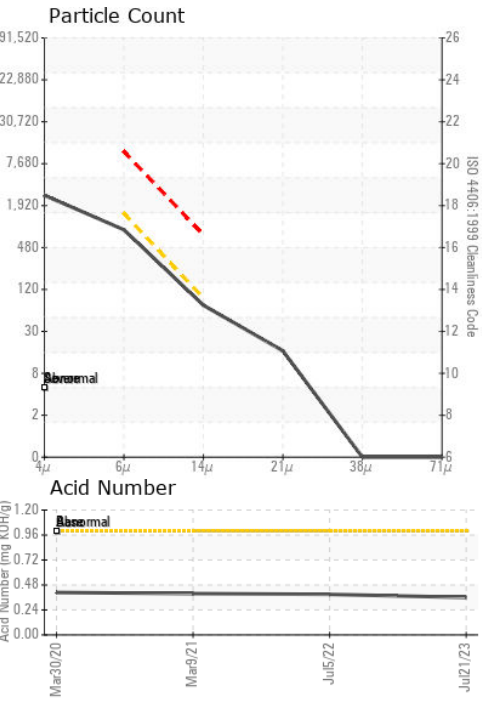
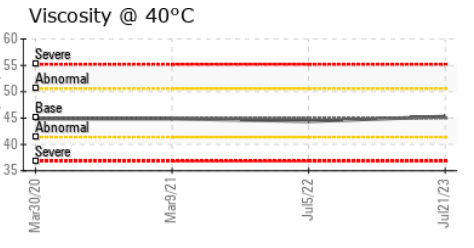
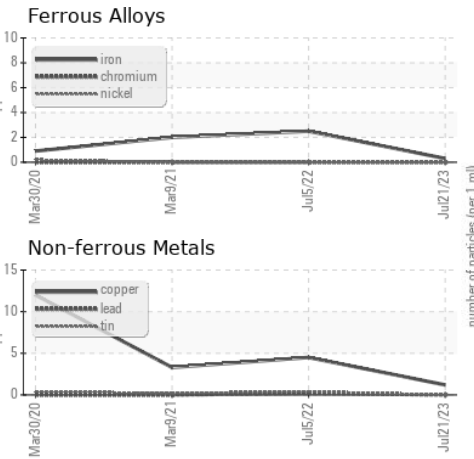
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	▲ HAZY
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	▲ 0.2%
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 45	45.3	44.4	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. : KCPA004424 **Received** : 14 Aug 2023
Lab Number : 05924344 **Diagnosed** : 16 Aug 2023
Unique Number : 10604291 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

KAPPY AUTO COLLISION
 3205 S COUNTY RD 45
 OWATONNA, MN
 US 55060
 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)

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F: