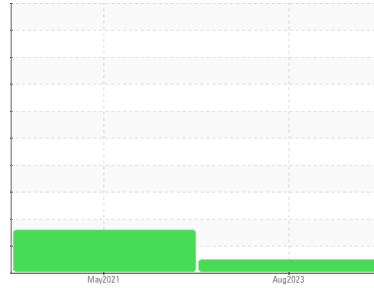




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
1340393 (S/N 1086)

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.

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			KCPA002968	KCP33090	---
Sample Date	Client Info			20 Aug 2023	19 May 2021	---
Machine Age	hrs	Client Info		137753	135897	---
Oil Age	hrs	Client Info		0	1600	---
Oil Changed	Client Info			N/A	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	1	0	---
Chromium	ppm	ASTM D5185m	>10	0	0	---
Nickel	ppm	ASTM D5185m	>3	0	0	---
Titanium	ppm	ASTM D5185m	>3	0	0	---
Silver	ppm	ASTM D5185m	>2	0	<1	---
Aluminum	ppm	ASTM D5185m	>10	<1	0	---
Lead	ppm	ASTM D5185m	>10	0	<1	---
Copper	ppm	ASTM D5185m	>50	6	7	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Antimony	ppm	ASTM D5185m		---	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

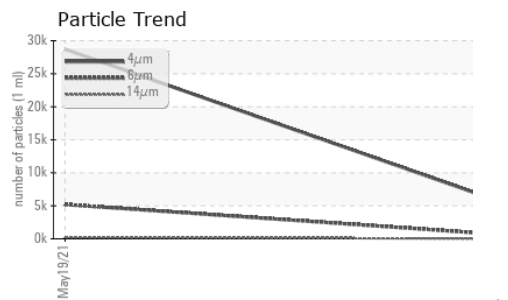
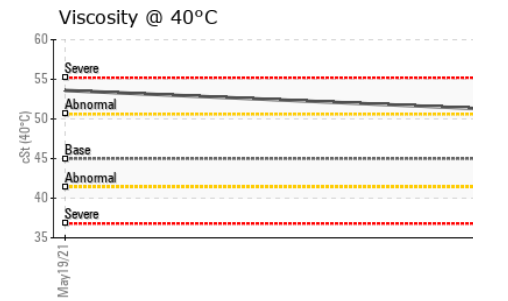
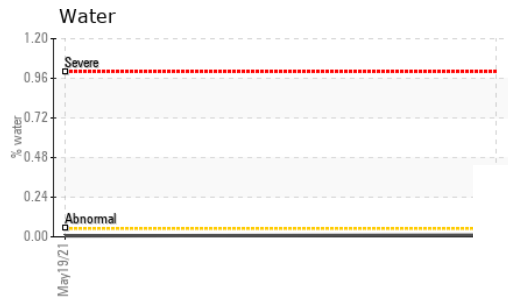
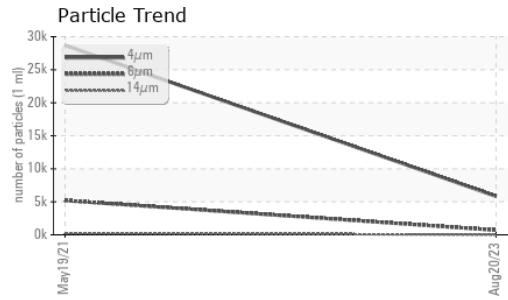
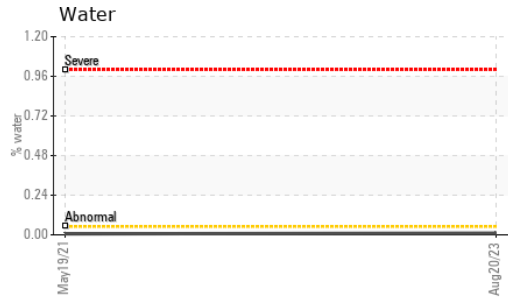
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	---
Barium	ppm	ASTM D5185m	90	0	0	---
Molybdenum	ppm	ASTM D5185m	0	0	0	---
Manganese	ppm	ASTM D5185m		<1	0	---
Magnesium	ppm	ASTM D5185m	100	19	<1	---
Calcium	ppm	ASTM D5185m	0	0	0	---
Phosphorus	ppm	ASTM D5185m	0	<1	6	---
Zinc	ppm	ASTM D5185m	0	0	0	---
Sulfur	ppm	ASTM D5185m	23500	23969	18160	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	2	2	---
Sodium	ppm	ASTM D5185m		3	0	---
Potassium	ppm	ASTM D5185m	>20	0	0	---
Water	%	ASTM D6304	>0.05	0.010	0.006	---
ppm Water	ppm	ASTM D6304	>500	103.5	65.4	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		5835	28701	---
Particles >6µm		ASTM D7647	>1300	707	▲ 5195	---
Particles >14µm		ASTM D7647	>80	15	▲ 238	---
Particles >21µm		ASTM D7647	>20	4	▲ 66	---
Particles >38µm		ASTM D7647	>4	0	3	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	20/17/11	▲ 20/15	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.38	0.460	---

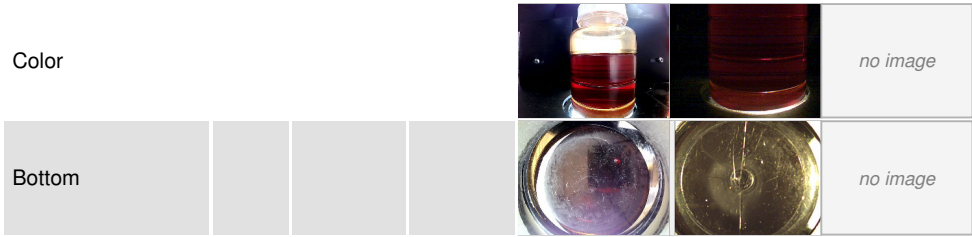
OIL ANALYSIS REPORT



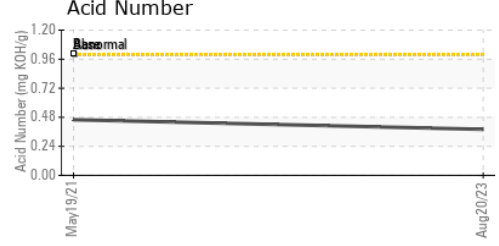
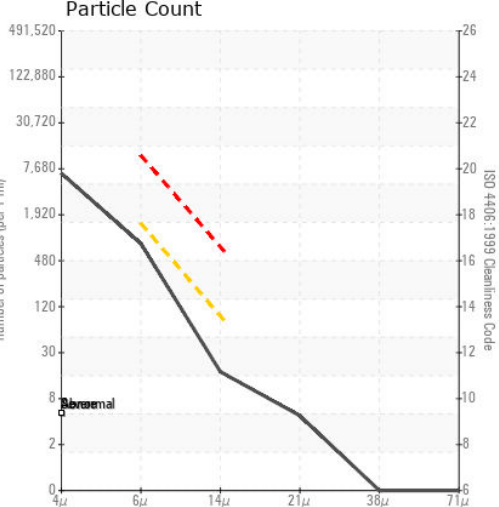
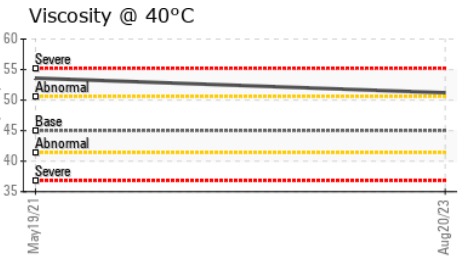
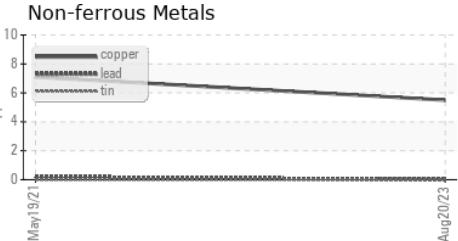
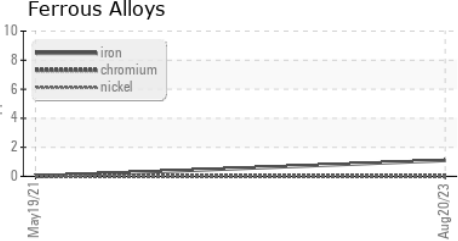
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	51.2	▲ 53.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA002968 **Received** : 28 Aug 2023
Lab Number : 05936708 **Diagnosed** : 29 Aug 2023
Unique Number : 10621979 **Diagnostician** : Angela Borella
Test Package : IND 2 (Additional Tests: KF, PrtCount)

BENCHMARK ELECTRONICS
 4021 PIKE LN
 CONCORD, CA
 US 94520
 Contact: JEFF TRAMONTANA
 JEFF.TRAMONTANA@BENCH.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)

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F: