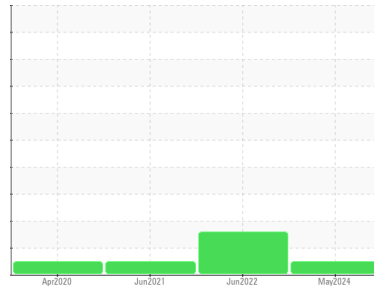




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
KAESER 6751326
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) S-460 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. 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 suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			KCPA016674	KC102594	KC89501
Sample Date	Client Info			08 May 2024	15 Jun 2022	08 Jun 2021
Machine Age	hrs	Client Info		5634	4532	3642
Oil Age	hrs	Client Info		0	1500	2604
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

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

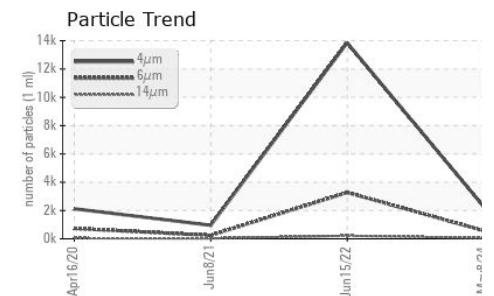
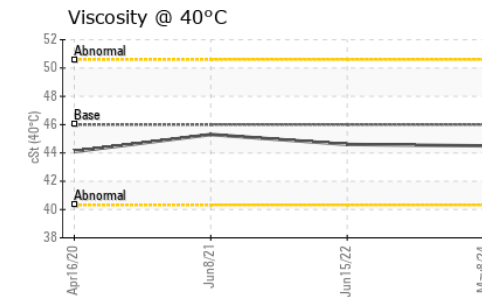
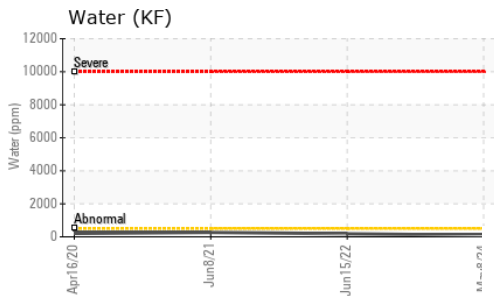
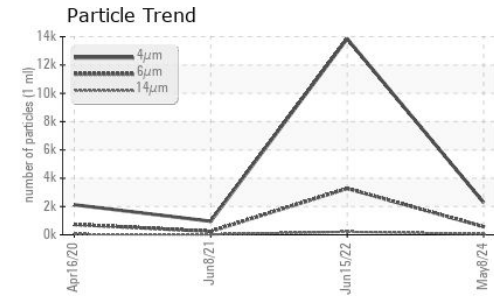
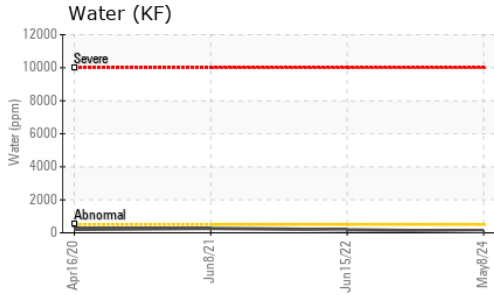
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m	90	<1	0	<1
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m	90	19	50	53
Calcium	ppm	ASTM D5185m	2	<1	1	1
Phosphorus	ppm	ASTM D5185m		6	7	2
Zinc	ppm	ASTM D5185m		7	0	0
Sulfur	ppm	ASTM D5185m		15932	21747	18008

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	1	<1	3
Sodium	ppm	ASTM D5185m		11	15	21
Potassium	ppm	ASTM D5185m	>20	2	<1	3
Water	%	ASTM D6304	>0.05	0.009	0.018	0.026
ppm Water	ppm	ASTM D6304	>500	91	184.6	269.3

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		2283	13852	956
Particles >6µm		ASTM D7647	>1300	572	▲ 3276	239
Particles >14µm		ASTM D7647	>80	56	▲ 216	26
Particles >21µm		ASTM D7647	>20	15	▲ 43	11
Particles >38µm		ASTM D7647	>4	1	1	2
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	18/16/13	▲ 21/19/15	15/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.22	0.24	0.290

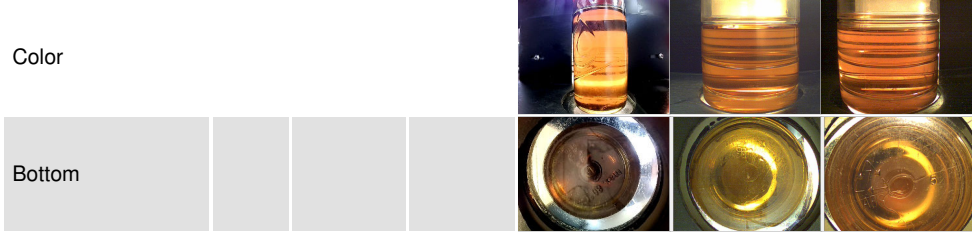
OIL ANALYSIS REPORT



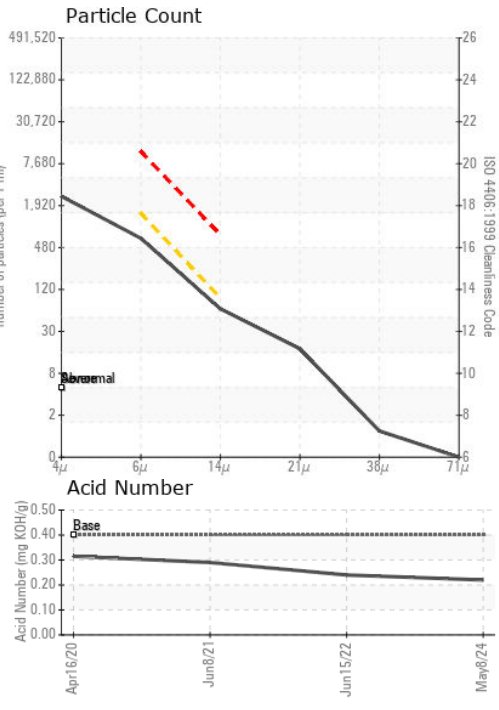
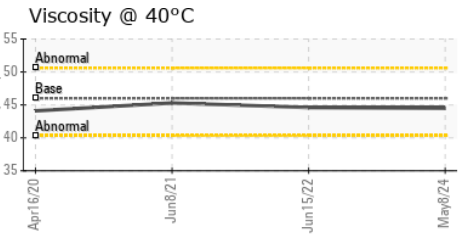
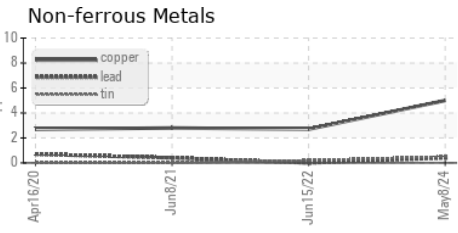
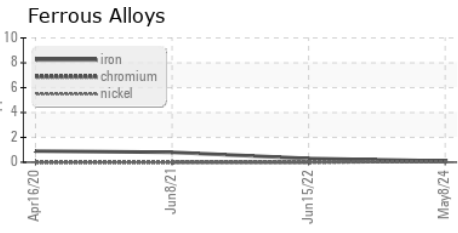
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	44.5	44.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA016674
Lab Number : 06195439
Unique Number : 11057562
Test Package : IND 2 (Additional Tests: KF, PrtCount)
Received : 30 May 2024
Tested : 31 May 2024
Diagnosed : 31 May 2024 - Angela Borella

BLACK & DECKER
 8601 E SAM LEE LN
 NORTHLAKE, TX
 US 76262
 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)