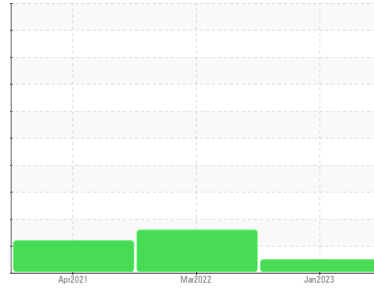




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
4087271 (S/N 4365)
 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			KCP46669D	KCP38392	KCP11092
Sample Date	Client Info			11 Jan 2023	08 Mar 2022	09 Apr 2021
Machine Age	hrs	Client Info		91636	84393	76785
Oil Age	hrs	Client Info		4000	0	3000
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	<1	0
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	0	1	0
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>50	9	2	6
Tin	ppm	ASTM D5185m	>10	0	<1	0
Antimony	ppm	ASTM D5185m		---	---	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

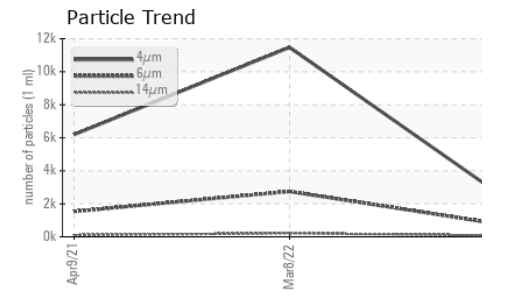
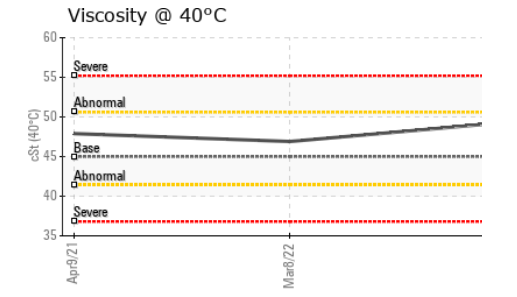
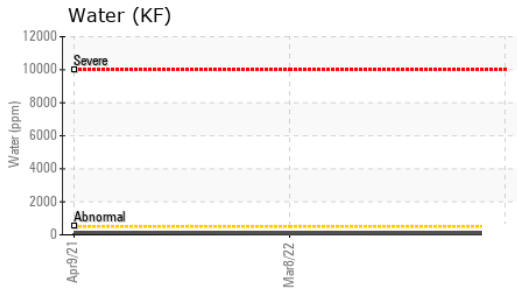
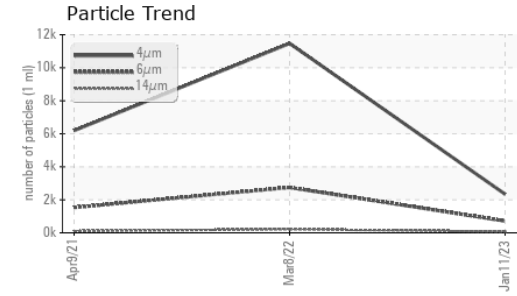
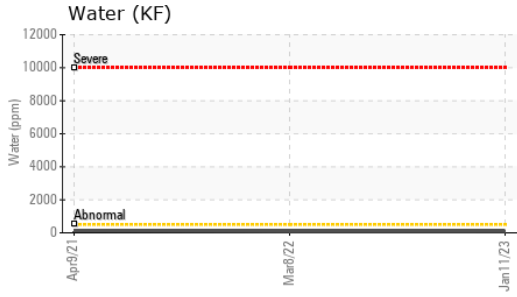
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	<1
Barium	ppm	ASTM D5185m	90	0	2	4
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m	100	0	32	17
Calcium	ppm	ASTM D5185m	0	0	0	0
Phosphorus	ppm	ASTM D5185m	0	4	2	11
Zinc	ppm	ASTM D5185m	0	0	13	0
Sulfur	ppm	ASTM D5185m	23500	19988	14578	14730

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	1	3	2
Sodium	ppm	ASTM D5185m		<1	4	3
Potassium	ppm	ASTM D5185m	>20	0	3	<1
Water	%	ASTM D6304	>0.05	0.009	0.008	0.013
ppm Water	ppm	ASTM D6304	>500	91.6	88.2	130.5

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		2340	11474	6191
Particles >6µm		ASTM D7647	>1300	717	▲ 2748	▲ 1531
Particles >14µm		ASTM D7647	>80	70	▲ 215	▲ 103
Particles >21µm		ASTM D7647	>20	25	▲ 67	▲ 28
Particles >38µm		ASTM D7647	>4	1	▲ 5	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	18/17/13	▲ 19/15	▲ 18/14

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.42	0.42	0.413

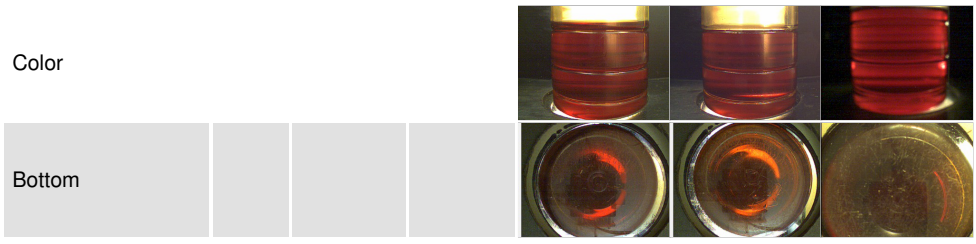
OIL ANALYSIS REPORT



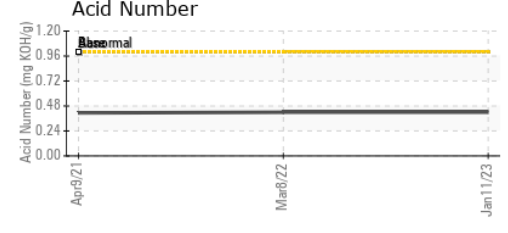
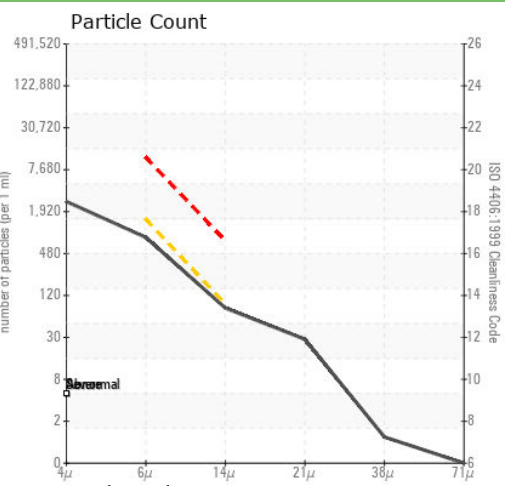
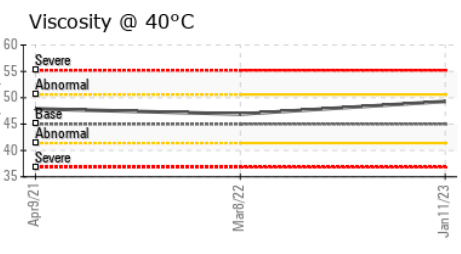
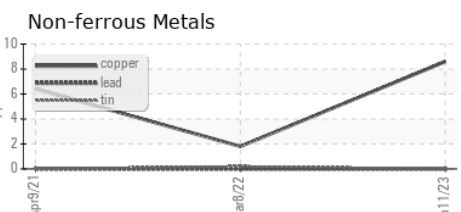
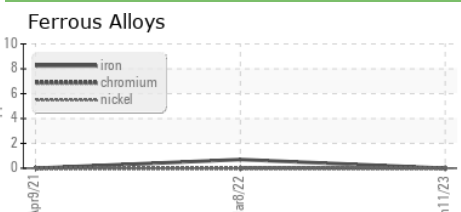
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 45	49.3	46.9	47.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP46669D **Received** : 12 Jan 2023
Lab Number : 05737854 **Diagnosed** : 14 Jan 2023
Unique Number : 10292453 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

WATTS MACHINING INC
 3370 VICTOR CT
 SANTA CLARA, CA
 US 95054
 Contact: B. HAZLE
 bhazle@wattsmachining.com
 T:
 F:

Certificate L2367
 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)