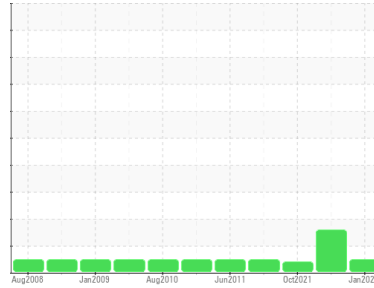




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
KAESER ES 250 1429204 (S/N 251250)

Component
Compressor

Fluid
KAESER SIGMA (OEM) FG-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			KCPA009169	KCP44819	KCP39390
Sample Date	Client Info			17 Jan 2024	14 Apr 2022	26 Oct 2021
Machine Age	hrs	Client Info		77776	69838	66909
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	<1	0
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m		<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	<1	0
Aluminum	ppm	ASTM D5185m	>25	9	20	8
Lead	ppm	ASTM D5185m	>25	<1	0	0
Copper	ppm	ASTM D5185m	>50	3	2	2
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Antimony	ppm	ASTM D5185m		---	---	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	<1	0

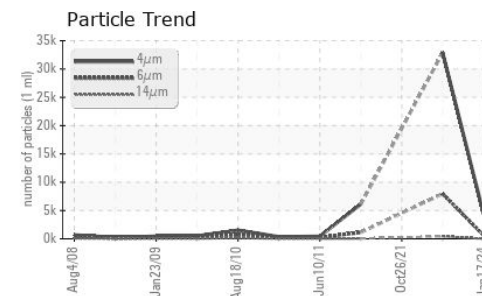
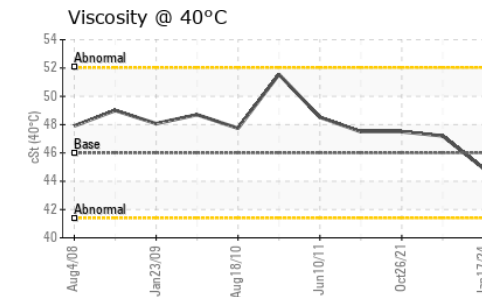
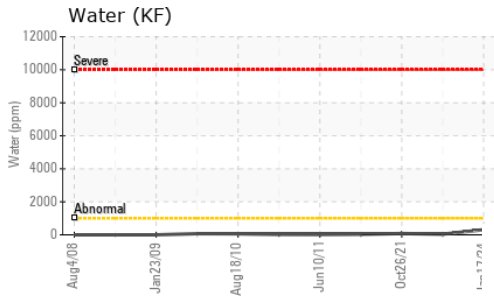
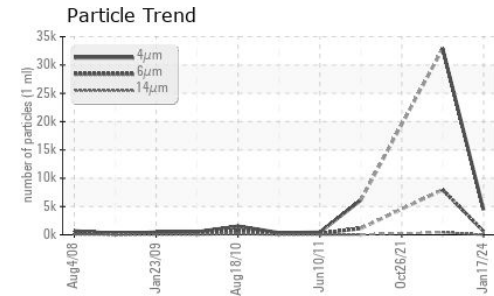
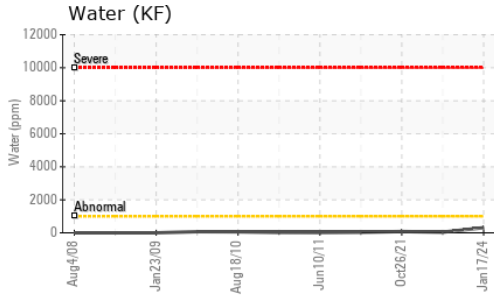
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		7	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		6	0	0
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m	500	411	527	334
Zinc	ppm	ASTM D5185m		60	208	132
Sulfur	ppm	ASTM D5185m		4185	1451	1042

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1	0	0
Sodium	ppm	ASTM D5185m		0	0	<1
Potassium	ppm	ASTM D5185m	>20	<1	2	0
Water	%	ASTM D6304	>0.1	0.030	0.004	0.007
ppm Water	ppm	ASTM D6304	>1000	310	40.1	78.5

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		4403	32893	---
Particles >6µm		ASTM D7647	>1300	612	▲ 7967	---
Particles >14µm		ASTM D7647	>80	12	▲ 428	---
Particles >21µm		ASTM D7647	>20	2	▲ 63	---
Particles >38µm		ASTM D7647	>4	0	3	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	19/16/11	▲ 20/16	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.5	1.517	1.55	1.227

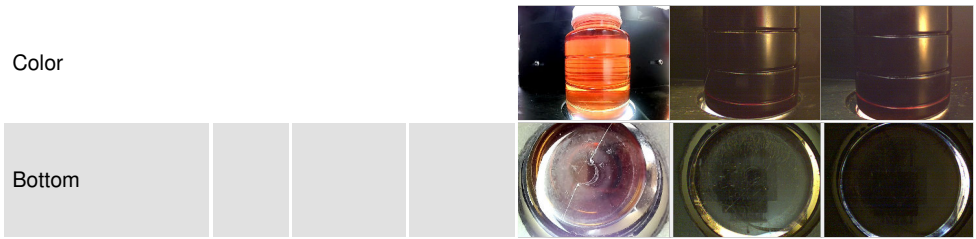
OIL ANALYSIS REPORT



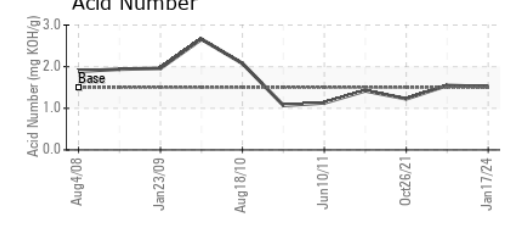
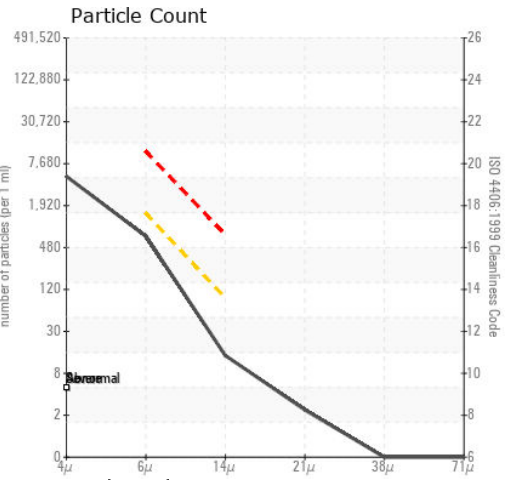
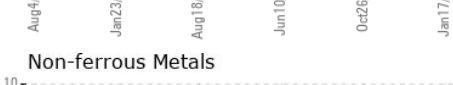
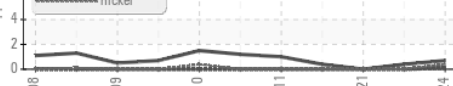
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	44.9	47.2	47.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA009169
Lab Number : 06098432
Unique Number : 10896662
Test Package : IND 2 (Additional Tests: KF, PrtCount)

HILMAR CHEESE
 9001 N LANDER AVE
 HILMAR, CA
 US 95324
 Contact: I. GUTIERREZ
 igutierrez@hilmarcheese.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)