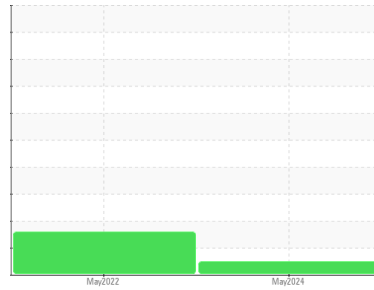




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
6394289 (S/N 1144)
 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
 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		KCPA012489	KCP44872	---
Sample Date	Client Info		09 May 2024	18 May 2022	---
Machine Age	hrs	Client Info	22813	20315	---
Oil Age	hrs	Client Info	0	12000	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	ATTENTION	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<1	<1	---
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	0	---
Aluminum	ppm	ASTM D5185m >10	<1	<1	---
Lead	ppm	ASTM D5185m >10	0	0	---
Copper	ppm	ASTM D5185m >50	3	11	---
Tin	ppm	ASTM D5185m >10	<1	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	21	0	---
Molybdenum	ppm	ASTM D5185m 0	0	0	---
Manganese	ppm	ASTM D5185m	<1	0	---
Magnesium	ppm	ASTM D5185m 100	67	8	---
Calcium	ppm	ASTM D5185m 0	2	0	---
Phosphorus	ppm	ASTM D5185m 0	3	0	---
Zinc	ppm	ASTM D5185m 0	18	80	---
Sulfur	ppm	ASTM D5185m 23500	22966	16952	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<1	<1	---
Sodium	ppm	ASTM D5185m	18	2	---
Potassium	ppm	ASTM D5185m >20	2	0	---
Water	%	ASTM D6304 >0.05	0.025	0.006	---
ppm Water	ppm	ASTM D6304 >500	251	62.4	---

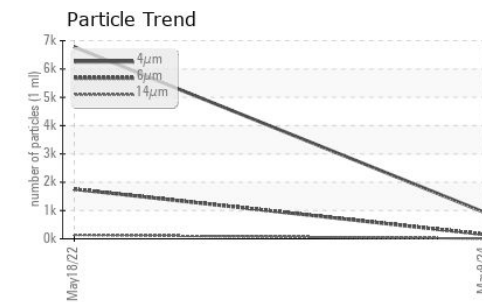
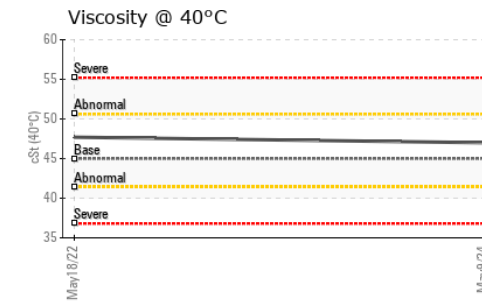
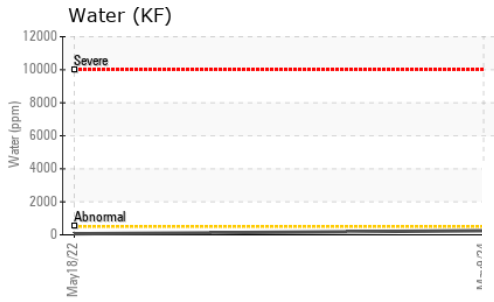
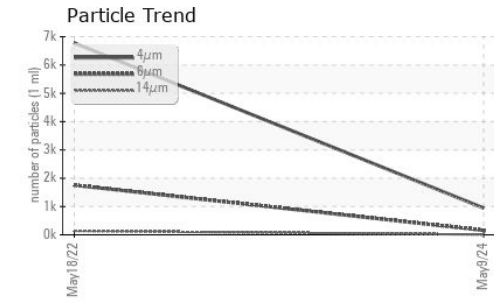
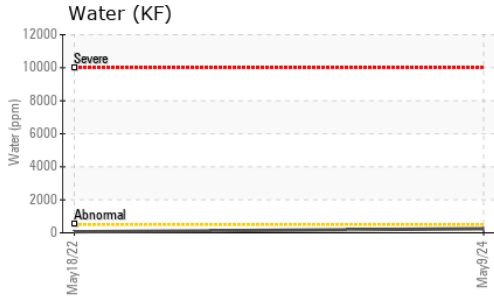
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		947	6776	---
Particles >6µm	ASTM D7647 >1300		159	1755	---
Particles >14µm	ASTM D7647 >80		7	137	---
Particles >21µm	ASTM D7647 >20		1	28	---
Particles >38µm	ASTM D7647 >4		0	3	---
Particles >71µm	ASTM D7647 >3		0	0	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	17/14/10	20/18/14	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.42	0.36	---

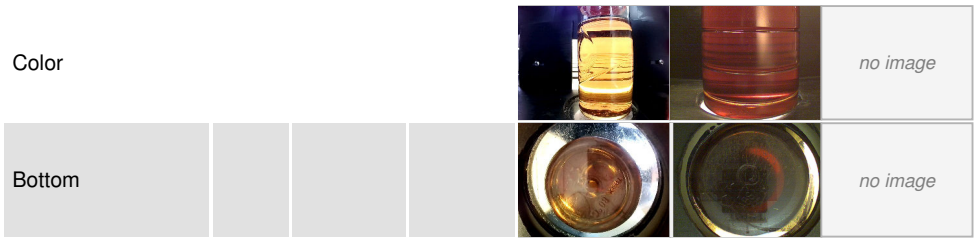
OIL ANALYSIS REPORT



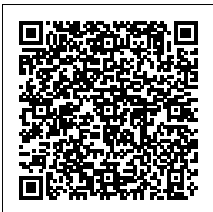
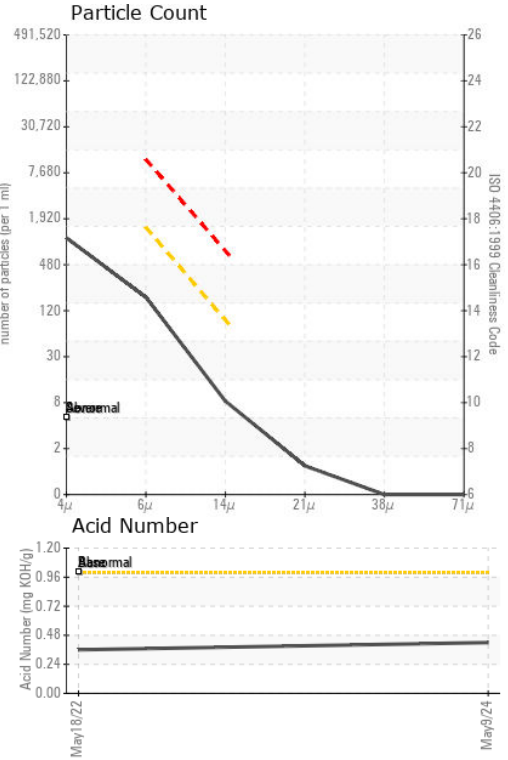
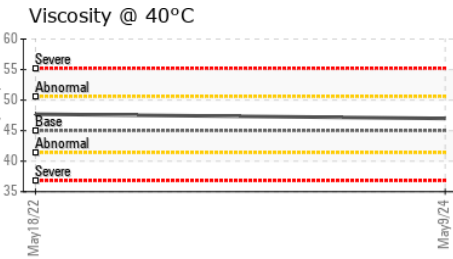
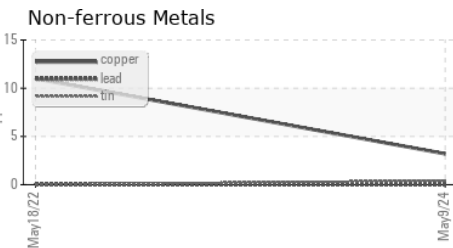
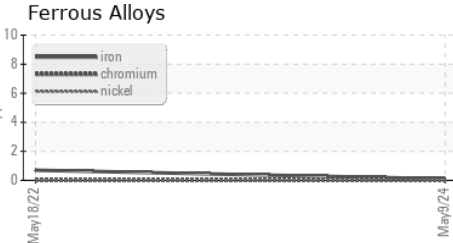
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	VLITE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	VLITE	---
Sand/Dirt	scalar	*Visual	NONE	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	47.0	47.7	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA012489 **Received** : 20 May 2024
Lab Number : 06184997 **Tested** : 22 May 2024
Unique Number : 11036323 **Diagnosed** : 22 May 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

OLYMPUS SURGICAL
 5325 HELLYER AVE
 SAN JOSE, CA
 US 95138
 Contact: DELMER JOHNSON
 delmer.johnson@olympus.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)