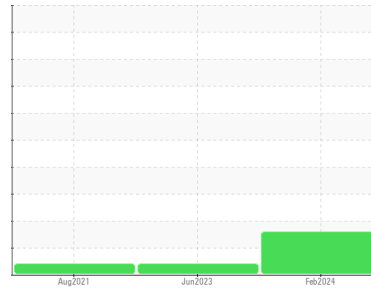


OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
4981280 (S/N 1595)

Component
Compressor

Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present 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			KCPA011622	KCPA002404	KCP37982
Sample Date	Client Info			09 Feb 2024	07 Jun 2023	30 Aug 2021
Machine Age	hrs	Client Info		32493	29763	22682
Oil Age	hrs	Client Info		0	0	2000
Oil Changed	Client Info			N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	2	<1	0
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>3	<1	0	0
Titanium	ppm	ASTM D5185m	>3	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>10	<1	0	0
Lead	ppm	ASTM D5185m	>10	<1	0	0
Copper	ppm	ASTM D5185m	>50	5	7	4
Tin	ppm	ASTM D5185m	>10	<1	0	0
Antimony	ppm	ASTM D5185m		---	---	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

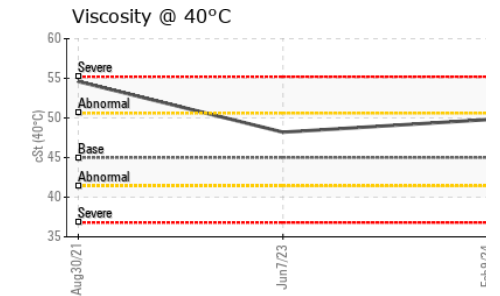
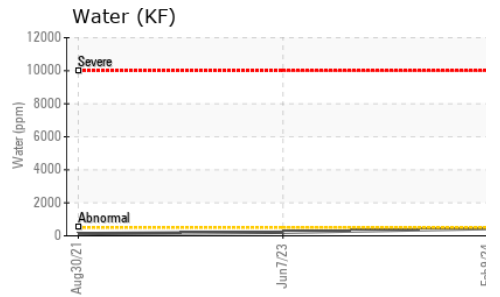
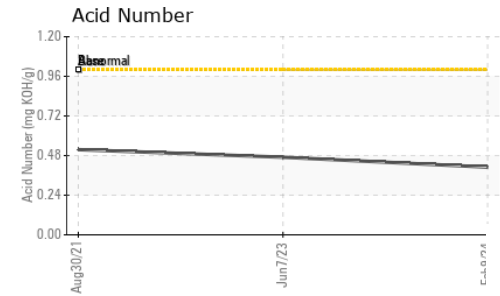
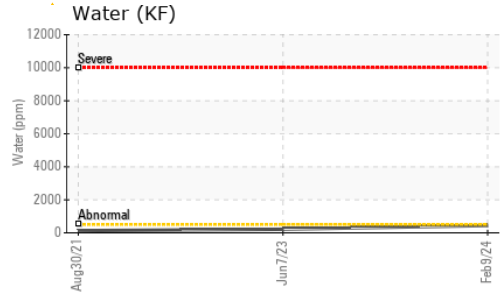
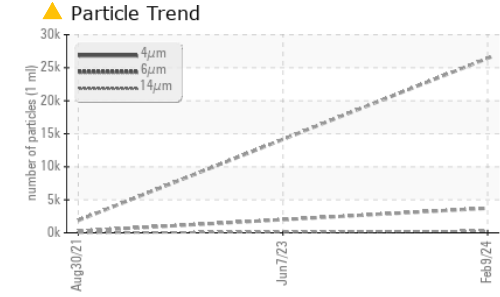
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	9
Barium	ppm	ASTM D5185m	90	7	34	0
Molybdenum	ppm	ASTM D5185m	0	<1	0	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	100	33	38	0
Calcium	ppm	ASTM D5185m	0	<1	1	0
Phosphorus	ppm	ASTM D5185m	0	0	4	3
Zinc	ppm	ASTM D5185m	0	13	3	0
Sulfur	ppm	ASTM D5185m	23500	20869	21604	11594

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	1	2
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	ppm	ASTM D5185m	>20	<1	0	0
Water	%	ASTM D6304	>0.05	0.044	0.021	0.013
ppm Water	ppm	ASTM D6304	>500	443	216.0	132.8

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		26432	---	1879
Particles >6µm		ASTM D7647	>1300	▲ 3721	---	264
Particles >14µm		ASTM D7647	>80	▲ 284	---	13
Particles >21µm		ASTM D7647	>20	▲ 66	---	4
Particles >38µm		ASTM D7647	>4	3	---	0
Particles >71µm		ASTM D7647	>3	0	---	0
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ 22/19/15	---	15/11

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.41	0.47	0.516

OIL ANALYSIS REPORT

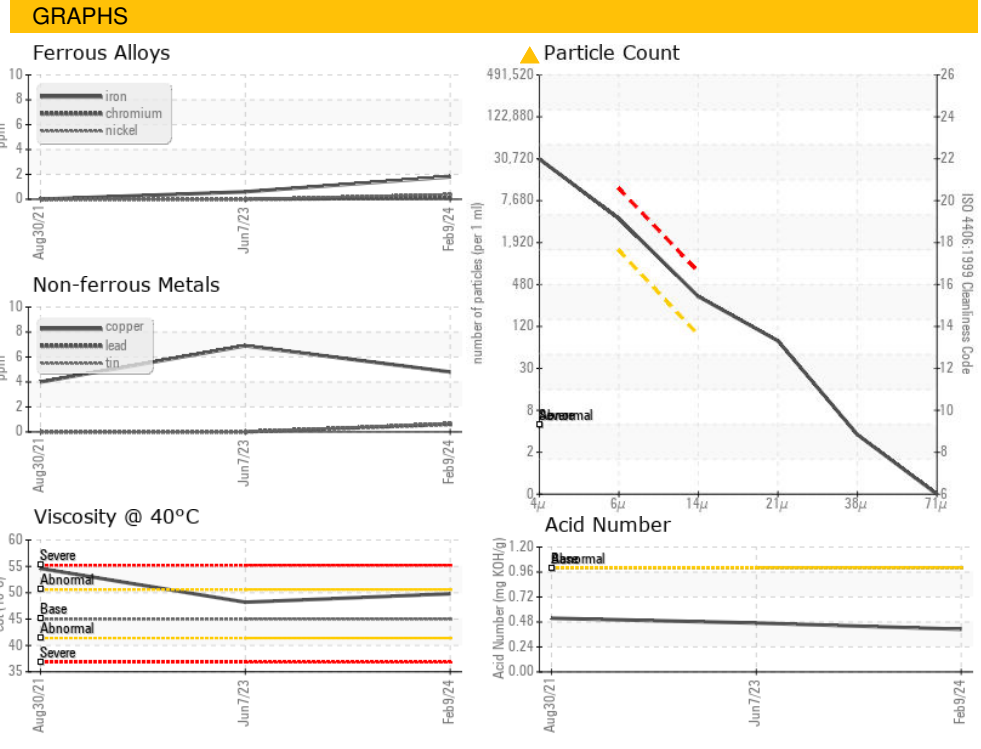


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	49.8	48.2 ▲ 54.6

SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				
Bottom				



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA011622 **Received** : 23 Feb 2024
Lab Number : 06098394 **Tested** : 26 Feb 2024
Unique Number : 10896624 **Diagnosed** : 26 Feb 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

TORAY ADVANCED COMPOSITES
 18410 BUTTERFIELD BLVD
 MORGAN HILL, CA
 US 95037
 Contact: J. ROTOLO
 j.rotolo@toraytac-usa.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)