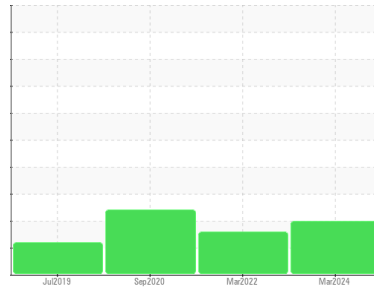




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
KAESER SX 7 2672485 (S/N 1504)
 Component
Compressor
 Fluid
KAESER SIGMA (OEM) M-460 (--- GAL)

DIAGNOSIS

Recommendation

Oil and 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 moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KCPA013589	KCP44080	KCP29446
Sample Date	Client Info		11 Mar 2024	14 Mar 2022	03 Sep 2020
Machine Age	hrs	Client Info	27818	25799	24152
Oil Age	hrs	Client Info	0	2774	0
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			ATTENTION	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	0	<1	2
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m >3	0	0	<1
Titanium	ppm	ASTM D5185m >3	0	0	0
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >10	0	2	2
Lead	ppm	ASTM D5185m >10	0	0	0
Copper	ppm	ASTM D5185m >50	0	2	4
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	2	0
Barium	ppm	ASTM D5185m 90	0	39	5
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m 100	<1	87	34
Calcium	ppm	ASTM D5185m 0	0	<1	1
Phosphorus	ppm	ASTM D5185m 0	171	2	<1
Zinc	ppm	ASTM D5185m 0	0	1	17
Sulfur	ppm	ASTM D5185m 23500	2611	17308	15573

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<1	<1	1
Sodium	ppm	ASTM D5185m	<1	3	6
Potassium	ppm	ASTM D5185m >20	0	0	2
Water	%	ASTM D6304 >0.05	0.003	0.024	0.018
ppm Water	ppm	ASTM D6304 >500	32	242.6	188.8

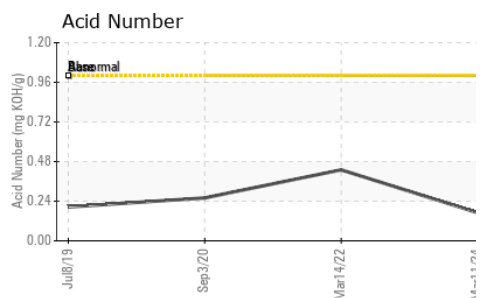
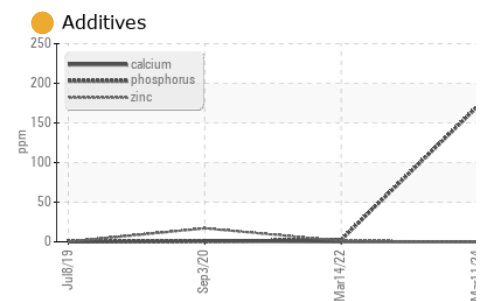
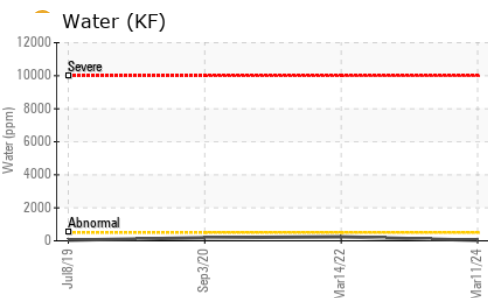
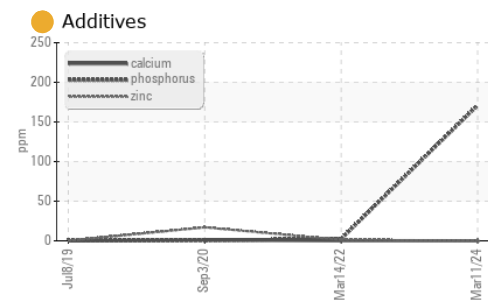
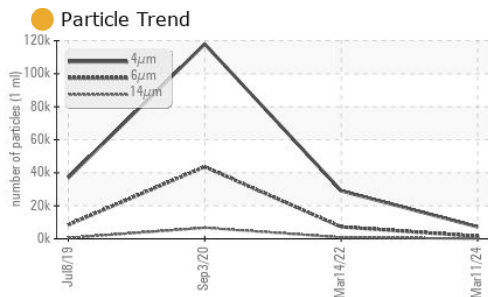
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		7241	29068	117946
Particles >6µm	ASTM D7647	>1300	1517	7215	43626
Particles >14µm	ASTM D7647	>80	72	829	6692
Particles >21µm	ASTM D7647	>20	17	247	1991
Particles >38µm	ASTM D7647	>4	0	8	60
Particles >71µm	ASTM D7647	>3	0	0	4
Oil Cleanliness	ISO 4406 (c)	>--/17/13	20/18/13	20/17	23/20

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.17	0.43	0.260

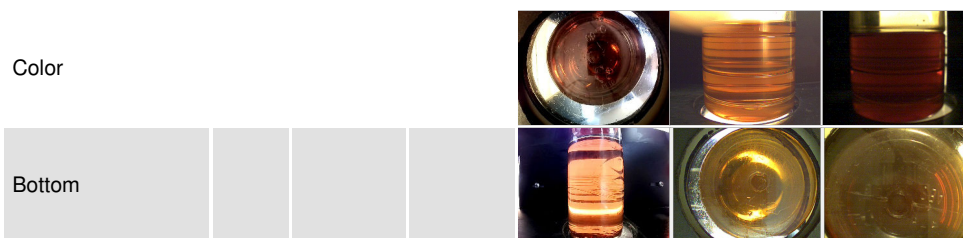
OIL ANALYSIS REPORT



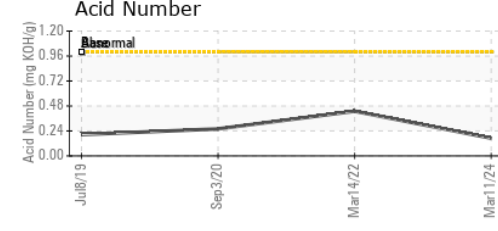
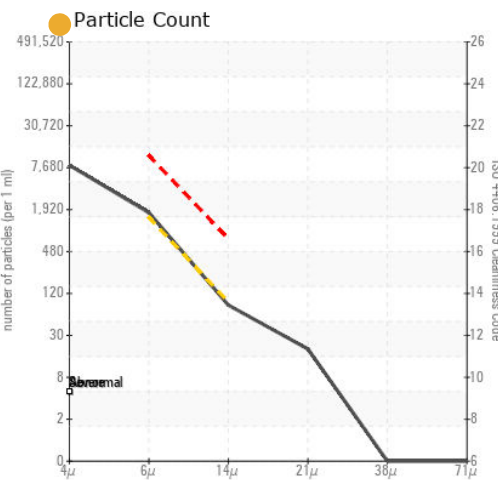
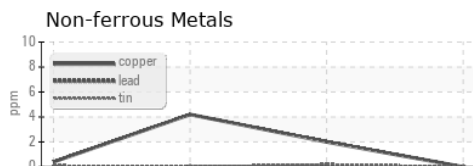
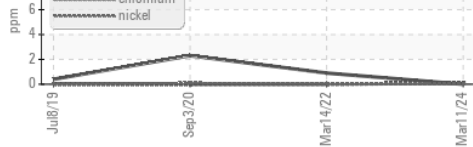
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	45	65.9	48.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA013589 **Received** : 09 Apr 2024
Lab Number : 06143729 **Tested** : 10 Apr 2024
Unique Number : 10968537 **Diagnosed** : 12 Apr 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

TRAMWAY VENEERS INC
 2603 TRAMWAY RD
 SANFORD, NC
 US 27332
 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)