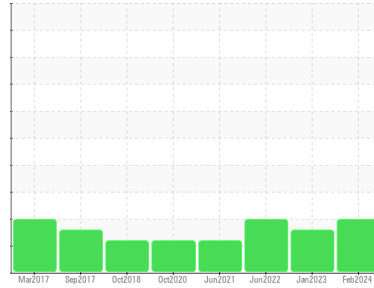




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
KAESER SM 11 2028648 (S/N 1241)

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. 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 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		KCP36744	KCP55757	KCP50850
Sample Date	Client Info		09 Feb 2024	27 Jan 2023	14 Jun 2022
Machine Age	hrs	Client Info	95671	88341	83638
Oil Age	hrs	Client Info	6000	5000	3500
Oil Changed	Client Info		Changed	N/A	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	0	0	<1
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m >3	0	0	1
Titanium	ppm	ASTM D5185m >3	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	2
Aluminum	ppm	ASTM D5185m >10	0	0	2
Lead	ppm	ASTM D5185m >10	0	0	<1
Copper	ppm	ASTM D5185m >50	13	6	12
Tin	ppm	ASTM D5185m >10	0	0	1
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	0	<1
Barium	ppm	ASTM D5185m 90	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 100	0	0	<1
Calcium	ppm	ASTM D5185m 0	0	0	2
Phosphorus	ppm	ASTM D5185m 0	0	3	9
Zinc	ppm	ASTM D5185m 0	0	0	0
Sulfur	ppm	ASTM D5185m 23500	15062	17300	22380

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	0	0	<1
Sodium	ppm	ASTM D5185m	2	0	<1
Potassium	ppm	ASTM D5185m >20	0	<1	0
Water	%	ASTM D6304 >0.05	0.005	0.012	0.011
ppm Water	ppm	ASTM D6304 >500	58	125.2	117.4

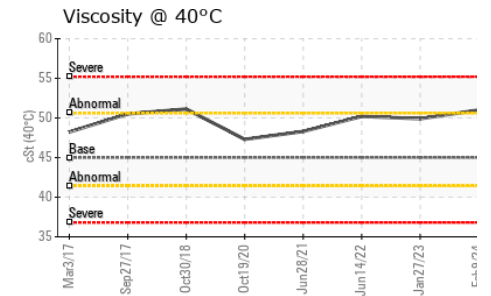
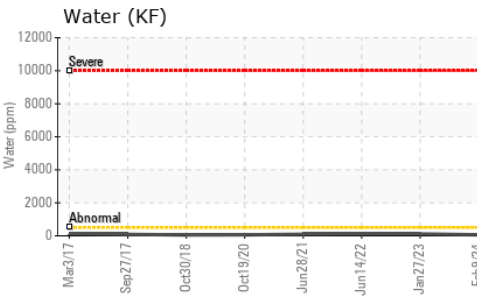
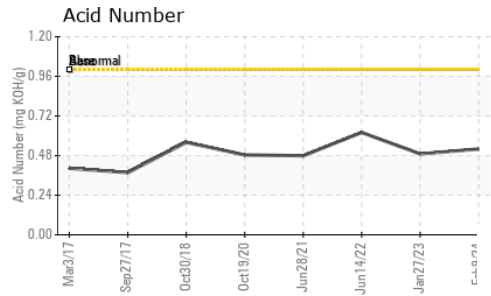
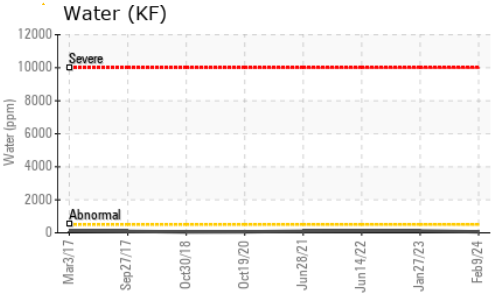
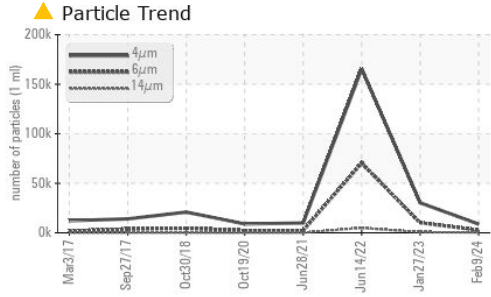
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		8769	30300	165467
Particles >6µm	ASTM D7647	>1300	▲ 2709	▲ 10092	▲ 70364
Particles >14µm	ASTM D7647	>80	▲ 375	▲ 654	▲ 4916
Particles >21µm	ASTM D7647	>20	▲ 131	▲ 148	▲ 1148
Particles >38µm	ASTM D7647	>4	▲ 7	1	▲ 32
Particles >71µm	ASTM D7647	>3	1	0	1
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 20/19/16	▲ 22/21/17	▲ 25/23/19

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.52	0.49	0.62

OIL ANALYSIS REPORT

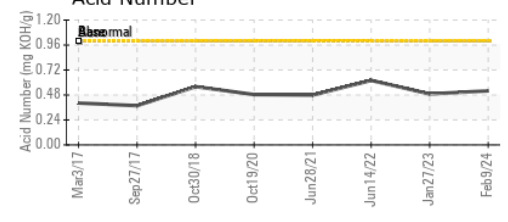
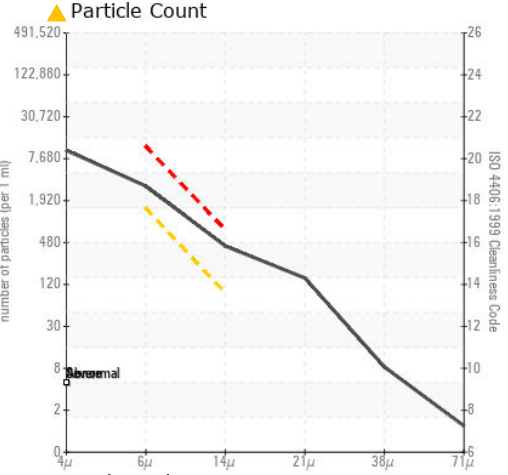
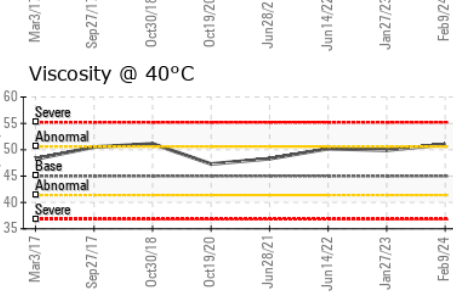
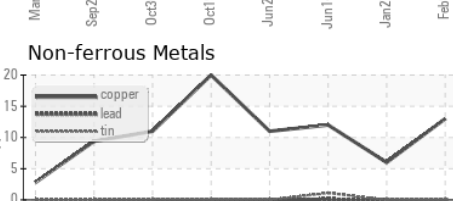
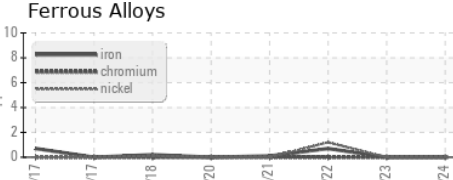


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	51.0	49.9	50.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCP36744 **Received** : 26 Feb 2024
Lab Number : 06100163 **Tested** : 27 Feb 2024
Unique Number : 10898393 **Diagnosed** : 28 Feb 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

PENSKE
 11701 W CARMEN AVE
 MILWAUKEE, WI
 US 53225
 Contact: JEFF ADAMS
 jeff.adams@penske.com
 T:
 F:

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)