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OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	MARGINAL

Machine Id
KAESER BSD 60 6744118 (S/N 1494)

Component
Compressor

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

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. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KCPA009371	KCPA000335	KCP45374
Sample Date		Client Info		15 Nov 2023	20 Mar 2023	06 Jul 2022
Machine Age	hrs	Client Info		24549	2184	19314
Oil Age	hrs	Client Info		0	0	2753
Filter Age	hrs	Client Info		0	0	2753
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	0	<1	<1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	<1	<1
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>50	2	4	6
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

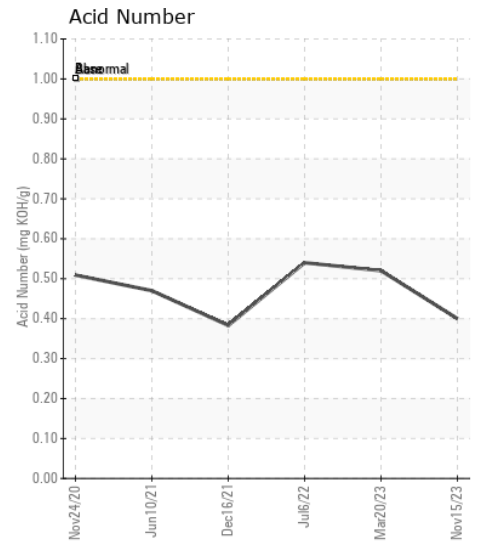
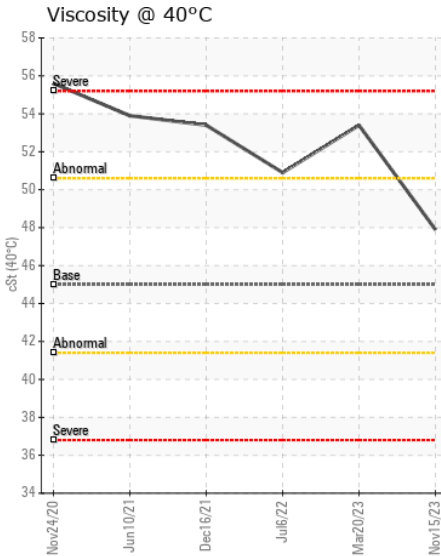
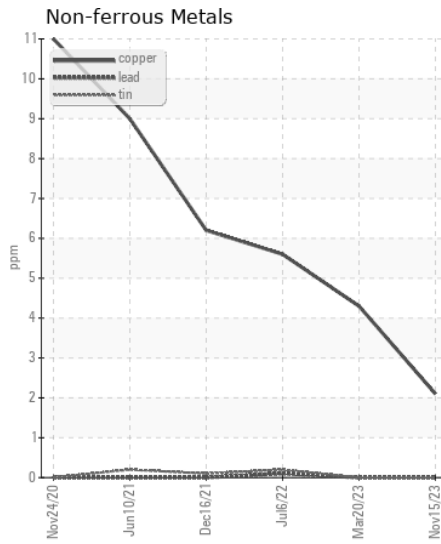
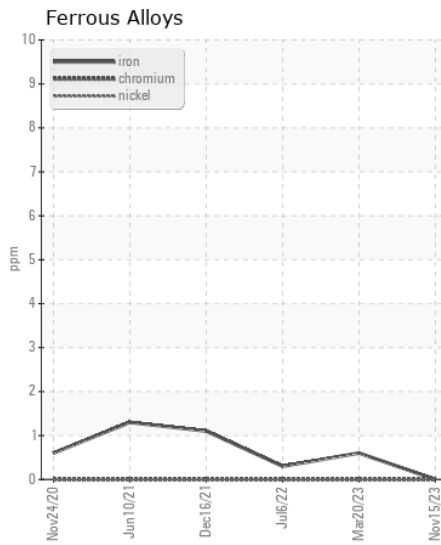
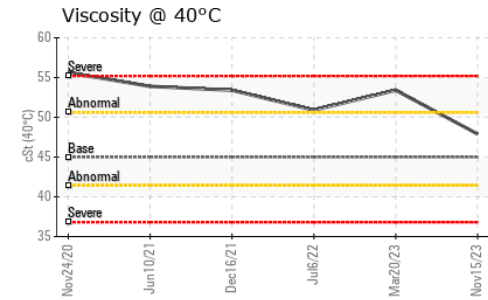
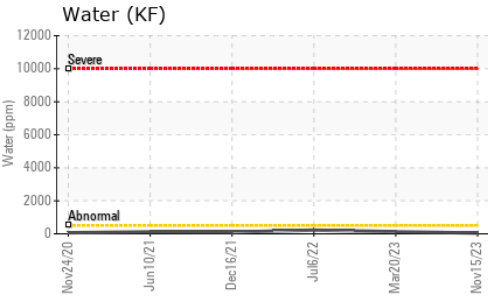
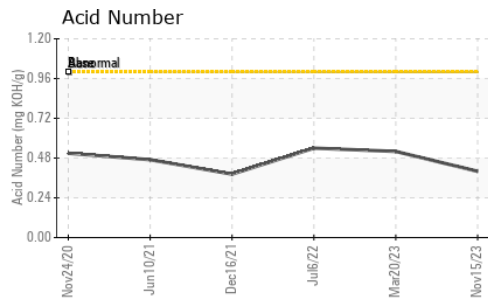
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>25	0	1	<1
Potassium	ppm	ASTM D5185m	>20	3	5	5
Water	%	ASTM D6304	>0.05	0.004	0.012	0.022
ppm Water	ppm	ASTM D6304	>500	45	129.9	224.6
Particles >4µm		ASTM D7647		---	6701	7444
Particles >6µm		ASTM D7647	>1300	---	● 1684	▲ 2778
Particles >14µm		ASTM D7647	>80	---	● 102	▲ 246
Particles >21µm		ASTM D7647	>20	---	● 20	● 31
Particles >38µm		ASTM D7647	>4	---	● 3	● 1
Particles >71µm		ASTM D7647	>3	---	● 0	● 0
Oil Cleanliness		ISO 4406 (c)	>-/17/13	---	● 20/18/14	▲ 20/19/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		21	20	13
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	90	48	38	15
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	100	▲ 78	83	38
Calcium	ppm	ASTM D5185m	0	2	2	0
Phosphorus	ppm	ASTM D5185m	0	2	2	0
Zinc	ppm	ASTM D5185m	0	0	2	0
Sulfur	ppm	ASTM D5185m	23500	17797	24781	20826
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.40	0.52	0.54
Visc @ 40°C	cSt	ASTM D445	45	47.9	▲ 53.4	50.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KCPA009371 **Received** : 06 Dec 2023
Lab Number : 06026430 **Tested** : 07 Dec 2023
Unique Number : 10776221 **Diagnosed** : 07 Dec 2023 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PrtCount)

ALPINE WASTE & RECYCLING
 645 W 53RD PL
 DENVER, CO
 US 80216
 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)

T:
F: