

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Machine Id

KAESER SM 10 4388413 (S/N 1206)

Compressor Fluid

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

DIAGNOSIS

A Recommendation

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

🛑 Wear

An increase in the copper level is noted. All other 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 INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA014331	KCPA003446	KCP41294
Sample Date		Client Info		01 Jul 2024	26 May 2023	25 Jan 2022
Machine Age	hrs	Client Info		0	13840	12344
Dil Age	hrs	Client Info		0	0	676
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>50	0	<1	2
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	0	<1	6
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>50	3 8	10	5
Tin	ppm	ASTM D5185m	>10	0	0	<1
Antimony	ppm	ASTM D5185m	210			0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ррш			-		-
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	90	0	6	2
Volybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Vagnesium	ppm	ASTM D5185m	100	<1	16	40
Calcium	ppm	ASTM D5185m	0	0	2	22
Phosphorus	ppm	ASTM D5185m	0	4	8	104
Zinc	ppm	ASTM D5185m	0	0	28	59
Sulfur	ppm	ASTM D5185m	23500	19452	22801	14498
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1	<1	<1
Sodium	ppm	ASTM D5185m		2	3	5
-	ppm	ASTM D5185m	>20	0	3	2
Potassium					0.000	▲ 0.532
Potassium Water	%	ASTM D6304	>0.05	0.012	0.006	
Water	% ppm	ASTM D6304 ASTM D6304	>0.05 >500	0.012 128	0.006 63.8	▲ 5320
	ppm					▲ 5320 history2
Water opm Water FLUID CLEANLIN	ppm	ASTM D6304	>500	128	63.8	
Vater opm Water FLUID CLEANLIN ^C articles >4μm	ppm	ASTM D6304 method	>500	128 current	63.8 history1	history2
Vater opm Water FLUID CLEANLIN Particles >4μm Particles >6μm	ppm	ASTM D6304 method ASTM D7647	>500 limit/base	128 current 8830	63.8 history1 	history2
Vater ppm Water FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm	ppm	ASTM D6304 method ASTM D7647 ASTM D7647	>500 limit/base >1300	128 current 8830 ▲ 3542	63.8 history1 	history2
Water ppm Water FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm Particles >21μm	ppm	ASTM D6304 method ASTM D7647 ASTM D7647 ASTM D7647	>500 limit/base >1300 >80	128 current 8830 ▲ 3542 ▲ 383	63.8 history1 	history2
Water opm Water	ppm	ASTM D6304 method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>500 limit/base >1300 >80 >20	128 current 8830 ▲ 3542 ▲ 383 ▲ 102	63.8 history1 	history2
Vater ppm Water FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm Particles >21μm Particles >38μm	ppm	ASTM D6304 method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>500 limit/base >1300 >80 >20 >4	128 current 8830 ▲ 3542 ▲ 383 ▲ 102 3	63.8 history1 	history2

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Contact/Location: FABIO CANUEZ - PENAUBMA



Built for a lifetime

12000

10000

800 (maa)

6000 Water 4000

2000

Water (KF)

1.20

(B/H0)

Ê0.72

ब ह.0.48

Pig 0.24

0.00

1200

1000

800

4000

2000

Water (ppm)

mber of particles (1 ml)

OIL ANALYSIS REPORT

limit/base

NONE

NONE

NONE

NONE

NONE

current

NONE

NONE

NONE

NONE

NONE

White Metal scalar *Vis Yellow Metal scalar *Vis Scalar *Vis Silt scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Odor scalar *Vis Sand/Dirt scalar *Vis Odor scalar *Vis Free Water scalar *Vis Sand/Dirt scalar *Vis Odor scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Odor scalar *Vis Free Water scalar *Vis SamPLE IMAGES mu Color						
White Metal scalar *Vis Silt scalar *Vis Silt scalar *Vis Silt scalar *Vis Sand/Dirt scalar *Vis Appearance scalar *Vis Free Water scalar *Vis Goor scalar *Vis Free Water scalar *Vis SAMPLE IMAGES mu Color Col	Particle Trend			VISUAL		methoo
Yellow Metal scalar *Vis Silt scalar *Vis Silt scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Appearance scalar *Vis Odor scalar *Vis Free Water scalar	4μm 6μm		100 CT 10 CT	White Metal	scalar	*Visual
Silt scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Sand/Dirt scalar *Vis Odor scalar *Vis Odor scalar *Vis Emulsified Water scalar *Vis Free Water scal	14μm		THE REAL PROPERTY AND A DECISION	Yellow Metal	scalar	*Visual
Debris scalar *Vis Sand/Dirt scalar *Vis Appearance scalar *Vis Odor scalar *Vis Odor scalar *Vis Free Water scalar *Vis Fluid PROPERTIES mu Visc @ 40°C cSt AST SAMPLE IMAGES mu Color Non-ferrous Metals Color Acid Number		and and 200 MI of 200 MI		Precipitate	scalar	*Visual
Sand/Dirt scalar *Vis Appearance scalar *Vis Godor scalar *Vis Emulsified Water scalar *Vis Free Water scalar *Vis SAMPLE IMAGES mu Color Acid Number		-		Silt	scalar	*Visual
Appearance scalar *Vis Odor scalar *Vis Emulsified Water scalar *Vis Free Water scalar *Vis FlUID PROPERTIES mu Visc @ 40°C cSt AST SAMPLE IMAGES mu Color Color Von-ferrous Metals Color Color Color Color Color Color	and the second s			Debris	scalar	*Visual
Vater (KF) See en Cooper Scalar Vis Free Water scalar Vis Free Water scalar Vis Free Water scalar Vis Free Water scalar Vis FLUID PROPERTIES multiple Visc @ 40°C cSt AST SAMPLE IMAGES multiple Color Color Bottom GRAPHS Ferrous Alloys Corrow Alloys Control of the stale Color Color Color Color Color Color	A REAL PROPERTY AND A REAL PROPERTY A REAL PRO			Sand/Dirt	scalar	*Visual
Vater (KF) Server	03/20	25/22	11/24	Appearance	scalar	*Visual
Free Water scalar *Vis FLUID PROPERTIES mu Visc @ 40°C cSt AST SAMPLE IMAGES mu Color Co	No N	Jan	JL	Odor	scalar	*Visual
Free Water scalar *Vis FLUID PROPERTIES mu Visc @ 40°C cSt AST SAMPLE IMAGES mu Visc @ 10°C cSt AST SAMPLE IMAGES mu Color Color Bottom GRAPHS Ferrous Alloys Citon function Color	Vater (KF)			Emulsified Water	scalar	*Visual
FLUID PROPERTIES mit Visc @ 40°C cSt SAMPLE IMAGES mit Son-ferrous Metals Color Grapper E000 Providence Signed E000 Providence Signed Ferrous Alloys Cid Number E000 Providence Image: Signed Color Signed Color Signed Color SignedColor Signed Color <td></td> <td></td> <td>1</td> <td>Free Water</td> <td>scalar</td> <td>*Visual</td>			1	Free Water	scalar	*Visual
Anomal Color Non-ferrous Metals	Severe			FLUID PROPE	RTIES	method
Anomal Cooper Non-ferrous Metals Cooper Source of the second of the	~			Visc @ 40°C	cSt	ASTM D4
Coopper Non-ferrous Metals Coopper tin Coopper Color Bottom GRAPHS Ferrous Alloys Coopper Coopper Color Bottom Coopper Color Co				SAMPLE IMAG	ES	method
RUGADON Ron-ferrous Metals Copper Sin Color Bottom GRAPHS Ferrous Alloys Color	Abnormal	\sim				
Acid Number		Jan 25/22 -	- 12/02/07	Color		
Bottom Bottom Bottom GRAPHS Ferrous Alloys Ferrous Alloys Ferrous Alloys Comparing Acid Number Bergmal	Non-ferrous Me		2			
GRAPHS Ferrous Alloys Ferrous Alloys Ferrous Alloys Ferrous Alloys	copper		1	Bottom		
Acid Number			/			
Acid Number						
Acid Number						
Acid Number				GRAPHS		
Acid Number						
Acid Number	/9/20	5/22 .	CZ/0			
Bbsemal	Nov	Jan2	1	a second chromium		
Rbssermal 2	Acid Number			E 4		
Absormal 0				2-		
	Base rmal				22	23



history1

NONE

NONE

NONE

NONE

MODER

history2

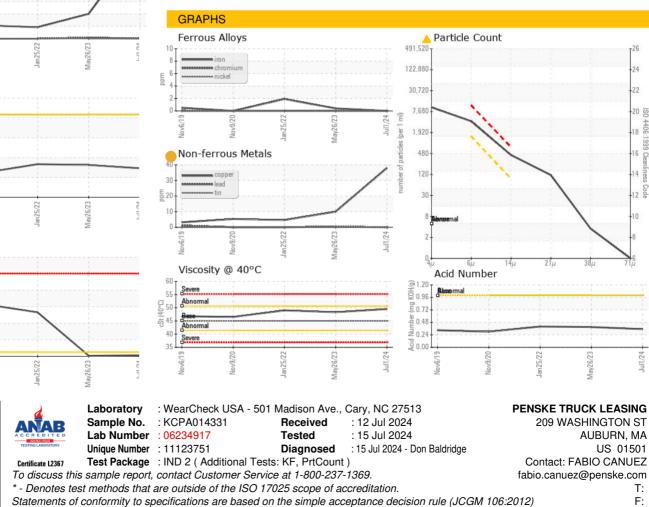
NONE

NONE

NONE

NONE

MODER



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