

OIL ANALYSIS REPORT

Sample Rating Trend



KAESER 7919039

Component Compressor

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

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

			Aug ² 022	Mar2024		
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA013297	KCP50256	
Sample Date		Client Info		07 Mar 2024	17 Aug 2022	
Machine Age	hrs	Client Info		2849	1283	
Oil Age	hrs	Client Info		1566	1283	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	ATTENTION	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	0	<1	
Chromium	ppm	ASTM D5185m	>10	0	0	
Nickel	ppm	ASTM D5185m	>3	0	0	
Titanium	ppm	ASTM D5185m	>3	0	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>10	0	<1	
Lead	ppm	ASTM D5185m	>10	0	<1	
Copper	ppm	ASTM D5185m	>50	2	2	
Tin	ppm	ASTM D5185m	>10	0	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	
Barium	ppm	ASTM D5185m	90	0	0	
Molybdenum	ppm	ASTM D5185m	0	0	0	
Manganese	ppm	ASTM D5185m		0	<1	
Magnesium	ppm	ASTM D5185m	100	39	50	
Calcium	ppm	ASTM D5185m	0	0	0	
Phosphorus	ppm	ASTM D5185m	0	0	1	
Zinc	ppm	ASTM D5185m	0	0	4	
Sulfur	ppm	ASTM D5185m	23500	21340	21247	
CONTAMINANTS	;	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<1	0	
Sodium	ppm	ASTM D5185m		13	10	
Potassium	ppm	ASTM D5185m	>20	3	3	
Water	%	ASTM D6304	>0.05	0.022	0.017	
ppm Water	ppm	ASTM D6304	>500	221	171.6	
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		3842	5610	
Particles >6µm		ASTM D7647	>1300	1240	2128	
Particles >14µm		ASTM D7647	>80	64	63	
Particles >21µm		ASTM D7647	>20	11	4	
Particles >38µm		ASTM D7647	>4	0	0	
Particles >71µm		ASTM D7647	>3	0	0	
Oil Cleanliness		ISO 4406 (c)	>/17/13	19/17/13	20/18/13	
FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.32	0.33	



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12000 T	Water (KF)		VISUAL		method	limit/base	current	history1	history2
10000 -	Severe	v	Vhite Metal	scalar	*Visual	NONE	NONE	NONE	
			ellow Metal	scalar	*Visual	NONE	NONE	NONE	
0008 (ppm)			Precipitate	scalar	*Visual	NONE	NONE	NONE	
A000			Silt	scalar	*Visual	NONE	NONE	NONE	
2000 -			Debris	scalar	*Visual	NONE	NONE	NONE	
2000-	Abnormal		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	. 1//22 - Mai/22		ppearance	scalar	*Visual	NORML	NORML	NORML	
	Aug1 //22 Mar7/24	C	Ddor	scalar	*Visual	NORML	NORML	NORML	
	Deutiele Tueud	E	mulsified Water	scalar	*Visual	>0.05	NEG	NEG	
^{6k} T	Particle Trend	- F	ree Water	scalar	*Visual		NEG	NEG	
Ē ^{5k}	4μm 6μm 14μm		FLUID PROPERT	IES	method	limit/base	current	history1	history2
(m) salicites (1 m) sali		V	/isc @ 40°C	cSt	ASTM D445	45	45.5	43.7	
i jo ja 2k - aquinu 1k -	ALSO LOW NEEDER THE		SAMPLE IMAGES	6	method	limit/base	current	history1	history2
Ok	Ma7724	- c	Color				s.		no image
12000	Water (KF)	E	Bottom						no image
4000 Vater (ppm)		-	GRAPHS						
≥ 4000-			Ferrous Alloys				Particle Count	t	
2000 -	Abnormal	10-	iron			491,520]		1 ²⁶
0 L		0. C.	chromium			122,880			-24
r	Aug 1 //22 Acc 7-14	udd 4.				20.720			22
	Au	2.				30,720	Ī		+22
	Viscosity @ 40°C	0.				7,680	- N.		20 20
⁶⁰ T	 L		Aug17/22			Mar7/24 (per 1 ml)	\sim		0 440
55 -	Severe		Aug			Bad) sa			-0 6:199
ू 50-	Abnormal		Non-ferrous Metal	s		10 480			-16 Oe
() 50 - 0+) 15 45 -	Base	10	copper			sapipped 480 Jo aa 120			+20 ISO 4406:1999 Cleanliness Code
-0 45-	Abnormal	8.	nananananan lead			- quint			S Co
40	Severe	Edd 4	un j			30	+		-12 8
35		2.				8			10
,	Aug 1//22	0.					Bereve mal		
	Ач		Aug17/22			Mar7/24	t		-8
	Particle Trend		Aug			W O		1 1	20 716
^{6k} [4um		Viscosity @ 40°C			4	Acid Number	14μ 21μ	38μ 71μ
Ê ^{5k} -	4μm	60- 55-	Severe			(BHO) 1.20			
L () 4k -			Abnormal			호 0.96	_ 0		
jue 3k -		()-04) 153	Base			E 0.72			
o lagunu 1k -	#1.6.5.4.1044405.000 Continued in a fine the street in a fire the street in a fire the street in a fire the	دی دی 40	Abnormal			40.48 W 0.24			
₽ 1k-		35.	Severe						
ok L		10	Aug17/22 -			Mar7/24 -	Aug 17/22 .		Mar7/24 -
-	с. см		Aug			Ma	Aug		Mai
	Laboratory Sample No Lab Number Unique Number Certificate L2367 To discuss this sample report * - Denotes test methods the Statements of conformity to	. : KC er : 06 er : 10 je : IN prt, cont at are c	950100 D 2 (Additional Tes tact Customer Servi putside of the ISO 1	Recei Teste Diagr ts: KF, P ice at 1-8 7025 sco	ived : 27 ed : 28 nosed : 30 PrtCount) 800-237-1369 ope of accred	7 Mar 2024 3 Mar 2024 Mar 2024 - Don 9. Jitation.	-	4775 Contact: Se	GISTICS LLC TINSLEY RD DALLAS, TX US 75211 rvice Manager T: F: