

OIL ANALYSIS REPORT



ISO

KAESER 6053992

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.

	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KCPA015212		
Sample Date		Client Info		21 Feb 2024		
Machine Age	hrs	Client Info		3083		
Oil Age	hrs	Client Info		3083		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>50	0		
Chromium	ppm	ASTM D5185m	>10	0		
Nickel	ppm	ASTM D5185m	>3	۲ ۲		
Titanium	ppm		>3	0		
Silver		ASTM D5185m	>2	0		
	ppm			-		
Aluminum	ppm		>10	<1		
Lead	ppm	ASTM D5185m	>10	1		
Copper	ppm	ASTM D5185m		16		
Tin	ppm		>10	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0		
Barium	ppm	ASTM D5185m	90	0		
Molybdenum	ppm	ASTM D5185m	0	0		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m	100	2		
Calcium	ppm	ASTM D5185m	0	0		
Phosphorus	ppm	ASTM D5185m	0	3		
Zinc	ppm	ASTM D5185m	0	0		
Sulfur	ppm	ASTM D5185m	23500	17388		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	1		
Sodium	ppm	ASTM D5185m		<1		
Potassium	ppm	ASTM D5185m	>20	1		
			-	-		
Water	%	ASTM D6304	>0.05	0.002		
	% ppm	ASTM D6304 ASTM D6304	>0.05 >500	0.002 22		
	ppm					
Water ppm Water FLUID CLEANLIN Particles >4µm	ppm	ASTM D6304	>500	22		
ppm Water FLUID CLEANLIN Particles >4µm	ppm	ASTM D6304 method ASTM D7647	>500 limit/base	22 current 15952	 history1	 history2
opm Water FLUID CLEANLIN Particles >4μm Particles >6μm	ppm	ASTM D6304 method ASTM D7647 ASTM D7647	>500 limit/base >1300	22 current 15952 ▲ 5666	 history1 	 history2
opm Water FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm	ppm	ASTM D6304 method ASTM D7647 ASTM D7647 ASTM D7647	>500 limit/base >1300 >80	22 current 15952 ▲ 5666 ▲ 529	 history1 	 history2
opm 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 >20	22 current 15952 ▲ 5666 ▲ 529 ▲ 173	 history1 	 history2
opm 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	>500 limit/base >1300 >80 >20 >4	22 current 15952 ▲ 5666 ▲ 529 ▲ 173 ▲ 20	 history1 	 history2
ppm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm	ASTM D6304 method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>500 limit/base >1300 >80 >20 >4 >3	22 current 15952 ▲ 5666 ▲ 529 ▲ 173 ▲ 20 2	 history1 	 history2
opm Water FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm Particles >21μm Particles >38μm Particles >71μm Oil Cleanliness	ppm IESS	ASTM D6304 method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ISO 4406 (c)	>500 limit/base >1300 >80 >20 >4 >3 >/17/13	22 current 15952 ▲ 5666 ▲ 529 ▲ 173 ▲ 20	 history1 	 history2
opm Water FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm IESS	ASTM D6304 method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>500 limit/base >1300 >80 >20 >4 >3	22 current 15952 ▲ 5666 ▲ 529 ▲ 173 ▲ 20 2	 history1 	 history2



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Particle Trend	VISUAL		method	limit/base	current	history1	history2
4μm	White Metal	scalar	*Visual	NONE	NONE		
E 15k μ 14μm sep get 10k 14μm 5k 15k	Yellow Metal	scalar	*Visual	NONE	NONE		
9 10 10k	Precipitate	scalar	*Visual	NONE	NONE		
d	Silt	scalar	*Visual	NONE	NONE		
g 5k -	Debris	scalar	*Visual	NONE	NONE		
0k	Sand/Dirt	scalar	*Visual	NONE	NONE		
Feb 21/24 Feb 21/24	Appearance	scalar	*Visual	NORML	NORML		
Feb2	Odor	scalar	*Visual	NORML	NORML		
Water (KF)	Emulsified Water	scalar	*Visual	>0.05	NEG		
12000 T	Free Water	scalar	*Visual		NEG		
10000- Severe	FLUID PROPER	TIES	method	limit/base	current	history1	history2
E 8000	Visc @ 40°C	cSt	ASTM D445	45	44.4		
an buod ≥ 4000 -	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
2000 - Abnormal							
Feb21/24	Color					no image	no image
Acid Number	Bottom					no image	no image
<u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u>	GRAPHS						
10,48 -	Ferrous Alloys				Particle Count		
Q.24	¹⁰ I			491,520	I article count		T ²⁶
0.00	8 - iron chromium			122,880			-24
ии I с тэ	E 6						
Let	- 4			30,720	Ł		-22
Water (KF)				7,680			-20
12000	, Feb21/24			Feb21/24 . s (per 1 ml) 076'1	Vi.		-18 -18 -16 -14 -14 -12
10000 - Severe	Feb 2			Feb21/24 particles (per 1 m) 086			+18
8000-	Non-ferrous Meta	ls		3 480	· · · · · · · · · · · · · · · · · · ·	×	-16
6000	20 conner 1			120			14
4000	15 - measurements lead			jo aquinu			T
2000 - Abnormal	톱 10 -			30	+		12
01	5-			8	Severemal		10
Еф.21/24	0				adreemai o		
ن 2	21/24			Feb21/24			-8
Viscosity @ 40°C	Feb21.			윤 0	6.	14µ 21µ	38µ 71µ
60	Viscosity @ 40°C				Acid Number	i ija – čija	50μ 11μ
55 - Severe	60 55 Severe			(B/HO) 0.96	Basermal		
G 50 - Abnormal				ତୁ 0.96 ਛ 0.72			
0+) #3 45 + Base	000 000 000 000 000 000 000 000 000 00			는 U.72 코 0.48			
Abnormal	40 +			4 0.48			1
40	35			0.00 PC			
35	21/24			Feb21/24	21/24		Feb21/24
Feb21/24	Feb21			Feb	Feb21		Feb
To discuss this sample report	 : 10897378 : IND 2 (Additional Test, contact Customer Serv 	Rece Teste Diagr sts: KF, F vice at 1-8	ived : 23 ed : 27 nosed : 27 PrtCount) 800-237-1368	3 Feb 2024 7 Feb 2024 Feb 2024 - Don 9.	Baldridge	N	ITO STORAGE 384 EAST AVE MACEDON, NY US 14502 ervice Manage
* - Denotes test methods that Statements of conformity to s					rule (JCGM 106	:2012)	T: F: