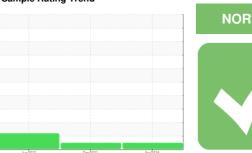


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id

KAESER SX 5 7378820 (S/N 1204)

Compressor

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

Recommendation

Resample at the next service interval to monitor.

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.

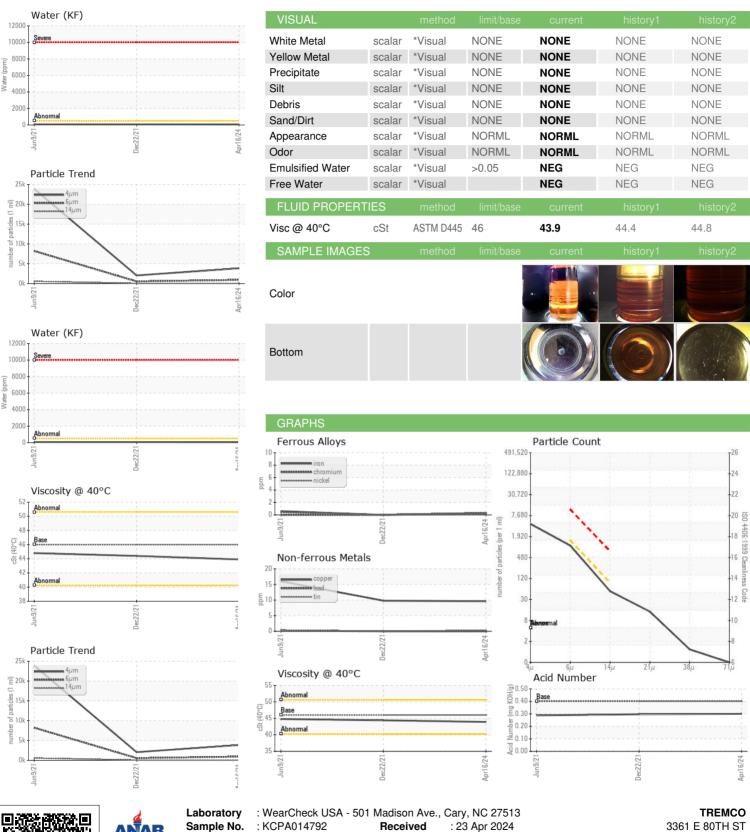
Fluid Condition

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

Tin ppm ASTM D5185m >10 <1 0 <1 0 <1 0 0 0 0 0 0 0 0 0 0 0 0			Jui	2021	Dec2021 Apr202	4	
Sample Number Client Info KCPA014792 KCP95707 KC93215	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 16 Apr 2024 22 Dec 2021 09 Jun 2021		,,,,,,,,,,,		mmusacc		•	
Machine Age hrs Client Info 12800 11348 7263 Oil Age hrs Client Info 1500 4000 7263 Oil Changed Client Info Changed NORMAL ABNORMAL Sample Status NORMAL NORMAL ABNORMAL WEAR METALS method Imitibase current history1 history2 Iron ppm ASTM D5185m >50 <1 0 <1 Chromium ppm ASTM D5185m >10 <1 0 0 Nickel ppm ASTM D5185m >3 <1 0 <1 Titanium ppm ASTM D5185m >2 0 0 <1 Lead ppm ASTM D5185m >10 2 0 <1 Copper ppm ASTM D5185m >10 1 0 <1 Vanadium ppm ASTM D5185m -1 0 0 <1 Acadium ppm							
Oil Age hrs Client Info 1500 4000 7263 Oil Changed Sample Status Client Info Changed Changed Nor Chang		bro			•		
Client Info Changed NORMAL NORMAL NORMAL ABNORMAL							
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 <1 0 <1 Chromium ppm ASTM D5185m >50 <1 0 0 Nickel ppm ASTM D5185m >3 <1 0 0 Titanium ppm ASTM D5185m >2 0 0 <1 Aluminum ppm ASTM D5185m >2 0 0 <1 Aluminum ppm ASTM D5185m >10 2 0 <1 Lead ppm ASTM D5185m >10 0 0 <1 Copper ppm ASTM D5185m >50 10 10 16 Tin ppm ASTM D5185m >50 10 10 <1 Vanadium ppm ASTM D5185m <1 0 0 <1 Cadmium ppm ASTM D5185m <1 0 0	· ·	1115					
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM DS185m >50 <1 0 <1 Chromium ppm ASTM DS185m >10 <1 0 0 Nickel ppm ASTM DS185m >3 <1 0 0 Silver ppm ASTM DS185m >2 0 0 <1 Aluminum ppm ASTM DS185m >10 2 0 <1 Aluminum ppm ASTM DS185m >10 0 0 <1 Lead ppm ASTM DS185m >10 0 0 <1 Lead ppm ASTM DS185m >10 0 0 <1 Lead ppm ASTM DS185m >10 0 0 <1 Copper ppm ASTM DS185m -1 0 0 <1 Antimony ppm ASTM DS185m -1 0 0	-		Cilent inio		_	ŭ	
Iron			m otherd	limit/booo			
Chromium ppm ASTM D5185m >10 <1							
Nickel	-						
Titanium							
Silver							
Aluminum ppm ASTM D5185m >10 2 0 <1 Lead ppm ASTM D5185m >10 0 0 <1 Copper ppm ASTM D5185m >50 10 10 10 16 Tin ppm ASTM D5185m >10 <1 0 <1 Antimony ppm ASTM D5185m >10 0 0 Vanadium ppm ASTM D5185m <10 0 0 Cadmium ppm ASTM D5185m <10 0 0 Cadmium ppm ASTM D5185m <1 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 13 Barium ppm ASTM D5185m 90 0 <1 0 <1 Manganese ppm ASTM D5185m 0 0 0 <1 Manganese ppm ASTM D5185m 90 <1 0 0 <1 Manganese ppm ASTM D5185m 90 <1 0 0 0 Phosphorus ppm ASTM D5185m 90 <1 0 10 Calcium ppm ASTM D5185m 90 <1 0 10 Calcium ppm ASTM D5185m 90 <1 0 10 Sulfur ppm ASTM D5185m 3 <1 10 Sulfur ppm ASTM D5185m 3 <1 10 Sulfur ppm ASTM D5185m 0 5 9 Zinc ppm ASTM D5185m 90 <1 0 <1 0 0 Phosphorus ppm ASTM D5185m 0 5 9 Zinc ppm ASTM D5185m 0 0 5 9 Zinc ppm ASTM D5185m 225 2 4 <1 Sodium ppm ASTM D5185m >25 2 4 <1 Sodium ppm ASTM D5185m >20 <1 0 <1 Water % ASTM D6804 >0.05 0.006 0.007 0.007 ppm Water ppm ASTM D6304 >0.05 0.006 0.007 0.007 Ppm Water ppm ASTM D6304 >0.05 0.006 0.007 0.007 Ppm Water ASTM D7647 >1300 927 542 A 8217 Particles >4µm ASTM D7647 >1300 927 542 A 8217 Particles >21µm ASTM D7647 >80 46 50 A 558 Particles >14µm ASTM D7647 >80 46 50 A 558 Particles >14µm ASTM D7647 >4 1 3 4 Particles >21µm ASTM D7647 >4 1 3 4 Particles >71µm ASTM D7647 >4 1 3 4 Particles >71µm ASTM D7647 >4 1 3 4 Particles >21µm ASTM D7647 >4 1 1 3 4							
Lead ppm ASTM D5185m >10 0 0 <1							
Copper ppm ASTM D5185m >50 10 10 16 Tin ppm ASTM D5185m >10 <1 0 <1 Antimony ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 13 Barium ppm ASTM D5185m 90 0 <1 0 Molybdenum ppm ASTM D5185m 90 0 <1 0 Manganesium ppm ASTM D5185m 0 0 <1 0 Magnesium ppm ASTM D5185m 90 <1 0 10 Calcium ppm ASTM D5185m 0 <1 0 10 Phosphorus ppm ASTM D5185m 0 5 9 2 Zinc ppm		ppm					
Tin ppm ASTM D5185m >10 <1 0 <1 0 0 Antimony ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 13 Barium ppm ASTM D5185m 90 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 0 0 <1 0 Manganese ppm ASTM D5185m 0 0 0 <1 0 Manganese ppm ASTM D5185m 0 0 0 <1 0 Magnesium ppm ASTM D5185m 0 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 <1 0 Molybdenum ppm ASTM D5185m 0 0 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 5 9 Zinc ppm ASTM D5185m 17625 12764 16405 CONTAMINANTS method limit/base current history1 history2 Sillicon ppm ASTM D5185m 0 0 0 3 Potassium ppm ASTM D5185m 0 0 0 3 Potassium ppm ASTM D5185m >20 <1 0 0 <1 Water % ASTM D6304 >0.05 0.006 0.007 0.007 ppm Water ppm ASTM D6304 >500 60 70.2 70.8 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >1300 927 542 A 8217 Particles >6μm ASTM D7647 >80 46 50 A 558 Particles >9μm ASTM D7647 >4 1 3 4 Particles >21μm ASTM D7647 >4 1 3 4 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >4 1 1 3 4 Particles >71μm ASTM D7647 >4 1 1 3 4 Particles >71μm ASTM D7647 >4 1 1 3 4 Particles >71μm ASTM D7647 >9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							
Antimony ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>50	10	10	
Vanadium ppm ASTM D5185m <1	Tin	ppm	ASTM D5185m	>10	<1	0	<1
Cadmium ppm ASTM D5185m <1	Antimony	ppm	ASTM D5185m			0	0
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron ppm ASTM D5185m 0 0 13 Barium ppm ASTM D5185m 90 0 <1	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 90 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		0	0	13
Manganese ppm ASTM D5185m 0 0 <1	Barium	ppm	ASTM D5185m	90	0	<1	0
Magnesium ppm ASTM D5185m 90 <1	Molybdenum	ppm	ASTM D5185m		<1	0	<1
Calcium ppm ASTM D5185m 2 0 <1	Manganese	ppm	ASTM D5185m		0	0	<1
Phosphorus ppm ASTM D5185m 0 5 9 Zinc ppm ASTM D5185m 3 <1	Magnesium	ppm	ASTM D5185m	90	<1	0	10
Zinc ppm ASTM D5185m 3 <1	Calcium	ppm	ASTM D5185m	2	0	<1	0
Zinc ppm ASTM D5185m 3 <1	Phosphorus	ppm	ASTM D5185m		0	5	9
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 <1 Sodium ppm ASTM D5185m 0 0 3 Potassium ppm ASTM D5185m >20 <1 0 <1 Water % ASTM D6304 >0.05 0.006 0.007 0.007 0.007 ppm Water ppm ASTM D6304 >500 60 70.2 70.8 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 3855 2055 23893 Particles >6μm ASTM D7647 >80 46 50 558 Particles >21μm ASTM D7647 >20 12 12 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0		ppm	ASTM D5185m		3	<1	10
Silicon ppm ASTM D5185m >25 2 4 <1	Sulfur	ppm	ASTM D5185m		17625	12764	16405
Sodium ppm ASTM D5185m 0 0 3 Potassium ppm ASTM D5185m >20 <1 0 <1 Water % ASTM D6304 >0.05 0.006 0.007 0.007 ppm Water ppm ASTM D6304 >500 60 70.2 70.8 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 3855 2055 23893 Particles >6μm ASTM D7647 >80 46 50 558 Particles >14μm ASTM D7647 >80 46 50 558 Particles >21μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 20/16	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1	Silicon	ppm	ASTM D5185m	>25	2	4	<1
Water % ASTM D6304 >0.05 0.006 0.007 0.007 ppm Water ppm ASTM D6304 >500 60 70.2 70.8 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 3855 2055 23893 Particles >6μm ASTM D7647 >1300 927 542 8217 Particles >14μm ASTM D7647 >80 46 50 558 Particles >21μm ASTM D7647 >20 12 12 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 △ 20/16	Sodium	ppm	ASTM D5185m		0	0	3
ppm Water ppm ASTM D6304 >500 60 70.2 70.8 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 3855 2055 23893 Particles >6μm ASTM D7647 >1300 927 542 № 8217 Particles >14μm ASTM D7647 >80 46 50 ♠ 558 Particles >21μm ASTM D7647 >20 12 12 ▲ 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 ▲ 20/16	Potassium	ppm	ASTM D5185m	>20	<1	0	<1
ppm Water ppm ASTM D6304 >500 60 70.2 70.8 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 3855 2055 23893 Particles >6μm ASTM D7647 >1300 927 542 № 8217 Particles >14μm ASTM D7647 >80 46 50 № 558 Particles >21μm ASTM D7647 >20 12 12 № 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 № 20/16	Water	%	ASTM D6304	>0.05	0.006	0.007	0.007
Particles >4μm ASTM D7647 3855 2055 23893 Particles >6μm ASTM D7647 >1300 927 542 8217 Particles >14μm ASTM D7647 >80 46 50 558 Particles >21μm ASTM D7647 >20 12 12 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 20/16	ppm Water	ppm	ASTM D6304			70.2	
Particles >6μm ASTM D7647 >1300 927 542 8217 Particles >14μm ASTM D7647 >80 46 50 558 Particles >21μm ASTM D7647 >20 12 12 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 Δ 20/16	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >6μm ASTM D7647 >1300 927 542 8217 Particles >14μm ASTM D7647 >80 46 50 558 Particles >21μm ASTM D7647 >20 12 12 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 Δ 20/16	Particles >4µm		ASTM D7647		3855	2055	23893
Particles >14μm ASTM D7647 >80 46 50 ▲ 558 Particles >21μm ASTM D7647 >20 12 12 ▲ 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 ▲ 20/16	Particles >6µm		ASTM D7647	>1300	927	542	<u>▲</u> 8217
Particles >21μm ASTM D7647 >20 12 12 134 Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 ▲ 20/16	Particles >14µm					50	
Particles >38μm ASTM D7647 >4 1 3 4 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 Δ 20/16	·						
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 ▲ 20/16	Particles >38µm						
Oil Cleanliness ISO 4406 (c) >/17/13 19/17/13 16/13 △ 20/16	•						
FLUID DEGRADATION method limit/base current history1 history2	Oil Cleanliness						
	FLUID DEGRADA	TION _	method	limi <u>t/başe</u>	current_	history1	history2



OIL ANALYSIS REPORT







Sample No. Lab Number

: 06157706 Unique Number: 10993129

: KCPA014792

Received **Tested** Diagnosed

: 24 Apr 2024

: 25 Apr 2024 - Don Baldridge

CLEVELAND, OH US 44127 Contact: SERVICE MANAGER

Test Package : IND 2 (Additional Tests: KF, PrtCount) Certificate 12367 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)

Contact/Location: SERVICE MANAGER - TRECLE

T:

F: