

OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Machine Id

KAESER ASD 40T 6587878 (S/N 1070)

Component Compressor

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

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

All component wear rates are normal.

Contamination

There is a moderate 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 Number Client Info KCPA014354 KCPA007385 KCP37072	SAMPLE INFORM	IATI <u>ON</u>	method	limit/base	current	history1	history2
Machine Age hrs Client Info 20482 17955 15658 Dil Age hrs Client Info 2527 0 1000 Dil Changed Client Info 2527 0 1000 Sample Status Imethod Imutbase current history1 history1 WEAR METALS method Imutbase current history1 history2 Iron ppm ASTM 05185m >10 0 0 0 Nickel ppm ASTM 05185m >3 0 0 0 Silver ppm ASTM 05185m >10 0 0 0 Cadmium ppm ASTM 05185m >10 0 0 0 Cadmium ppm ASTM 05185m 0 0 0 0 ASTM 05185m 0 0 0 0 0 0 Cadmium ppm ASTM 05185m 0 0 0 0 Radman <	Sample Number		Client Info		KCPA014354	KCPA007385	KCP37072
Oil Age Ins Client Info 2527 0 1000 Oil Changed Client Info Changed N/A Not Changed Sample Status Method Imilibase current Inistory1 Nistory2 Iron ppm ASTM D5185m >50 23 <1	Sample Date		Client Info		01 Jul 2024	25 Jan 2024	29 Aug 2023
Dil Changed Sample Status Client Info Changed ATTENTION N/A Not Changd ABNORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 23 <1	Machine Age	hrs	Client Info		20482	17955	15658
Dil Changed Client Info Changed N/A Not Changed Sample Status Imit Ubase current History1 ABNORMAL WEAR METALS method limit/base current History1 Not Changed Iron ppm ASTM D5185m >50 23 <1	Oil Age	hrs	Client Info		2527	0	1000
WEAR METALS method limit/base current history1 history2 iron ppm ASTM D5185m >50 23 <1	-		Client Info		Changed	N/A	Not Changd
Iron ppm ASTM D5185m >50 23 <1 8 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >10 0 <1	Sample Status				ATTENTION	NORMAL	ABNORMAL
Dromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >10 <1	WEAR METALS		method	limit/base	current	history1	history2
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	Iron	ppm	ASTM D5185m	>50	23	<1	8
Titanium ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >10 <1	Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum ppm ASTM D5185m >10 <1 0 3 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 8 6 4 Tin ppm ASTM D5185m >10 0 <1	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >50 8 6 4 Tin ppm ASTM D5185m >10 0 <1	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >50 8 6 4 Tin ppm ASTM D5185m >10 0 <1	Aluminum	ppm	ASTM D5185m	>10	<1	0	3
Copper ppm ASTM D5185m >50 8 6 4 Tin ppm ASTM D5185m >10 0 <1	Lead	ppm	ASTM D5185m	>10	0	0	0
Tin ppm ASTM D5185m >10 0 <1 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 0 0 0 Magnesse ppm ASTM D5185m 0 2 0 3 3 Phosphorus ppm ASTM D5185m 0 21 0 54 2 Sulfur ppm ASTM D5185m 25 <1 <1 <1 <1 Sulfur ppm ASTM D5185m 25 <1 <1 <1 <1 Sulfur ppm ASTM D5185m 20 0 0	Copper		ASTM D5185m	>50	8	6	4
Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Maganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 100 1 0 18 Calcium ppm ASTM D5185m 0 2 0 3 Phosphorus ppm ASTM D5185m 0 <1			ASTM D5185m	>10	0	<1	0
Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Maganese ppm ASTM D5185m 0 0 0 0 Magnese ppm ASTM D5185m 0 2 0 3 Magnesium ppm ASTM D5185m 0 2 0 3 Phosphorus ppm ASTM D5185m 0 <1	Vanadium		ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 0 0 0 0 0 Barium ppm ASTM D5185m 90 <1	Cadmium		ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 90 <1 0 2 Molybdenum ppm ASTM D5185m 0 0 0 0 Maganese ppm ASTM D5185m 100 1 0 18 Calcium ppm ASTM D5185m 100 1 0 3 Phosphorus ppm ASTM D5185m 0 8 4 2 Zinc ppm ASTM D5185m 0 8 4 2 Sulfur ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 0 0 0 0 Manganese ppm ASTM D5185m 100 1 0 18 Magnesium ppm ASTM D5185m 0 2 0 3 Calcium ppm ASTM D5185m 0 8 4 2 Calcium ppm ASTM D5185m 0 8 4 2 Zinc ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	0	0	0
Manganese ppm ASTM D5185m <1 <1 <1 <1 Magnesium ppm ASTM D5185m 100 1 0 18 Calcium ppm ASTM D5185m 0 2 0 3 Phosphorus ppm ASTM D5185m 0 8 4 2 Zinc ppm ASTM D5185m 0 <1 0 54 Sulfur ppm ASTM D5185m 23500 17809 13558 20286 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 <1 <1 Sodium ppm ASTM D5185m >20 0 0 5 Sodium ppm ASTM D5185m >20 0 0 5 Sodium ppm ASTM D5185m >20 0 0 5 Vater % ASTM D6304 >0.05 0.0112 0.008 0.146 opm Water ppm ASTM D7647 4562	Barium	ppm	ASTM D5185m	90	<1	0	2
Magnesium ppm ASTM D5185m 100 1 0 18 Calcium ppm ASTM D5185m 0 2 0 3 Phosphorus ppm ASTM D5185m 0 8 4 2 Zinc ppm ASTM D5185m 0 <1	Molybdenum	ppm	ASTM D5185m	0	0	0	0
Colum ppm ASTM D5185m 0 2 0 3 Phosphorus ppm ASTM D5185m 0 8 4 2 Zinc ppm ASTM D5185m 0 <1 0 54 Sulfur ppm ASTM D5185m 23500 17809 13558 20286 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 <1 <1 Sodium ppm ASTM D5185m >20 0 0 5 Sodium ppm ASTM D5185m >20 0 0 5 Water % ASTM D5185m >20 0 0 5 Water % ASTM D5185m >20 0 0.008 0.146 ppm ASTM D5185m >20 0 0.012 0.008 0.146 ppm ASTM D5185m >20 127 89 1464 FLUID CLEANLINESS method limit/base current history1<	Vanganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 0 8 4 2 Zinc ppm ASTM D5185m 0 <1	Magnesium	ppm	ASTM D5185m	100	1	0	18
Zinc ppm ASTM D5185m 0 <1 0 54 Sulfur ppm ASTM D5185m 23500 17809 13558 20286 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 <1 <1 <1 Sodium ppm ASTM D5185m >25 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	Calcium	ppm	ASTM D5185m	0	2	0	3
Sulfur ppm ASTM D5185m 23500 17809 13558 20286 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 <1 <1 <1 Sodium ppm ASTM D5185m >25 <1 <1 <1 <1 Sodium ppm ASTM D5185m >20 0 0 5 Vater % ASTM D6304 >0.05 0.012 0.008 0.146 oppm ASTM D6304 >500 127 89 1464 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 1300 1394 Particles >6µm ASTM D7647 >80 116 Particles >21µm ASTM D7647 20 26 Particles >38µm ASTM D7647 3 1	Phosphorus	ppm	ASTM D5185m	0	8	4	2
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25<1	Zinc	ppm	ASTM D5185m	0	<1	0	54
Silicon ppm ASTM D5185m >25 <1 <1 <1 Sodium ppm ASTM D5185m >20 0 0 5 Potassium ppm ASTM D5185m >20 0 0 5 Water % ASTM D6304 >0.05 0.012 0.008 ▲ 0.146 opm Water ppm ASTM D6304 >500 127 89 ▲ 1464 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 1394 Particles >6µm ASTM D7647 >80 116 Particles >1µm ASTM D7647 >20 26 Particles >38µm ASTM D7647 >3 1 Particles >71µm ASTM D7647 >3 1 Oil Cleanliness ISO 4406 (c) >/17/13 19/18/14 FLUID DEGRADATION method limit/base current histor	Sulfur	ppm	ASTM D5185m	23500	17809	13558	20286
Sodium ppm ASTM D5185m 3 <1 2 Potassium ppm ASTM D5185m >20 0 0 5 Water % ASTM D6304 >0.05 0.012 0.008 ▲ 0.146 opm Water ppm ASTM D6304 >500 127 89 ▲ 1464 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 4562 Particles >6µm ASTM D7647 >1300 1394 Particles >14µm ASTM D7647 >80 116 Particles >14µm ASTM D7647 >20 26 Particles >38µm ASTM D7647 >3 1 Particles >71µm ASTM D7647 >3 1 Oil Cleanliness ISO 4406 (c) >/17/13 19/18/14	CONTAMINANTS		method	limit/base	current	history1	history2
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Water % ASTM D6304 >0.05 0.012 0.008 ▲ 0.146 oppm Water ppm ASTM D6304 >500 127 89 ▲ 1464 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 4562 Particles >6µm ASTM D7647 >1300 1394 Particles >14µm ASTM D7647 >80 116 Particles >21µm ASTM D7647 >20 26 Particles >38µm ASTM D7647 >4 2 Particles >38µm ASTM D7647 >3 1 Particles >71µm ASTM D7647 3 1 Oil Cleanliness ISO 4406 (c) >/17/13 19/18/14 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		3	<1	2
opm Water ppm ASTM D6304 >500 127 89 ▲ 1464 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 4562 Particles >6µm ASTM D7647 >1300 1394 Particles >6µm ASTM D7647 >80 116 Particles >14µm ASTM D7647 >20 26 Particles >21µm ASTM D7647 >4 2 Particles >38µm ASTM D7647 >3 1 Particles >71µm ASTM D7647 3 1 Oil Cleanliness ISO 4406 (c) /17/13 19/18/14 FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	0	0	5
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 4562 Particles >6µm ASTM D7647 >1300 1394 Particles >6µm ASTM D7647 >80 116 Particles >14µm ASTM D7647 >20 26 Particles >21µm ASTM D7647 >20 26 Particles >38µm ASTM D7647 >4 2 Particles >71µm ASTM D7647 >3 1 Oil Cleanliness ISO 4406 (c) >/17/13 19/18/14 FLUID DEGRADATION method limit/base current history1 history2	Water	%	ASTM D6304	>0.05	0.012	0.008	0 .146
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Dil Cleanliness ISO 4406 (c) >/17/13 19/18/14 FLUID DEGRADATION method limit/base current history1 history2	Particles >38µm		ASTM D7647	>4	2		
FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>3	1		
	Oil Cleanliness		ISO 4406 (c)	>/17/13	<mark> 19/18/14</mark>		
Acid Number (AN) mg KOH/g ASTM D8045 1.0 0.58 0.53 0.39	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.58	0.53	0.39

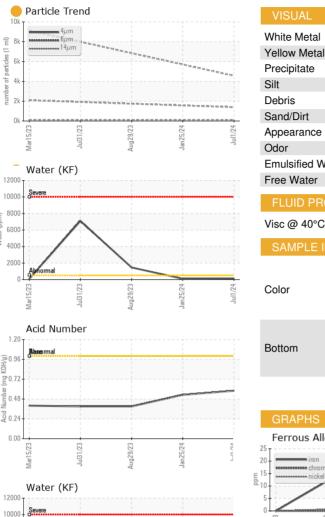
Contact/Location: B. SALVAGGI - AMABRO Page 1 of 2

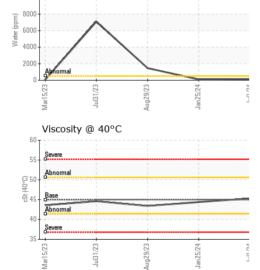


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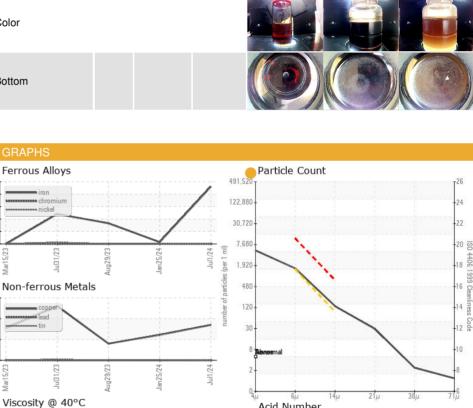
Water

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Certificate 12367



Acid Number

(B/1.20 HOX 0.96

E 0.72

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2 0.24

0.00 P

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: 12 Jul 2024

: 15 Jul 2024

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OIL ANALYSIS REPORT

scalar

*Visual

NONE

*Visual NONE NONE NONE NONE scalar NONE NONE scalar *Visua NONE NONE scalar *Visual NONE NONE NONE NONE *Visual LIGHT NONE LIGHT A MODER scalar NONE NONE NONE scalar *Visual NONE NORML NORML NORML Appearance scalar *Visual NORML *Visual NORML NORML NORML NORML scalar **Emulsified Water** scalar *Visual >0.05 NEG NEG ▲ 0.2% scalar *Visual NEG NEG NEG FLUID PROPERTIES Visc @ 40°C cSt ASTM D445 45 45.3 44.4 43.4 SAMPLE IMAGES GRAPHS Ferrous Alloys

NONE

MODER

MODER

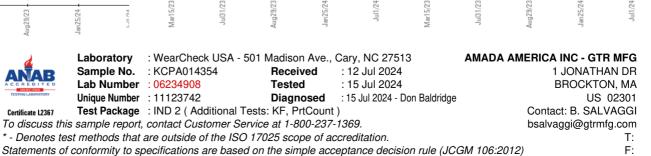


: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received

Diagnosed

Tested



Report Id: AMABRO [WUSCAR] 06234908 (Generated: 07/15/2024 13:57:50) Rev: 1

Laboratory

Sample No.

Lab Number

Unique Number : 11123742

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: KCPA014354

To discuss this sample report, contact Customer Service at 1-800-237-1369.

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

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

: 06234908

Mar15/23

Contact/Location: B. SALVAGGI - AMABRO

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