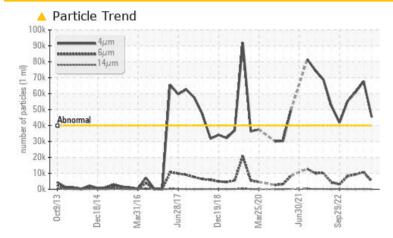


PROBLEM SUMMARY

Machine Id SL-42 12A Component Gearbox Fluid ISO 68 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

PROBLEMATIC T	EST RESULTS				
Sample Status			ATTENTION	ABNORMAL	ATTENTION
Particles >4µm	ASTM D7647	>40000	🔺 45247	67735	▲ 60878
Particles >6µm	ASTM D7647	>5000	6 5037	10692	9274
Oil Cleanliness	ISO 4406 (c)	>22/19/16	<u> </u>	🔺 23/21/14	▲ 23/20/14

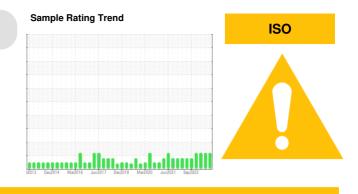
Customer Id: ZAPDAR Sample No.: ST43800 Lab Number: 05967812 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 <u>dougb@wearcheckusa.com</u>

To change component or sample information: Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u>



RECOMMENDED	ACTIONS			
Action	Status	Date	Done By	De
Contact Required			?	Dı (2

Description

Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

HISTORICAL DIAGNOSIS



28 Jun 2023 Diag: Don Baldridge

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

30 Mar 2023 Diag: Don Baldridge



Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



22 Dec 2022 Diag: Doug Bogart

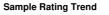
Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.







OIL ANALYSIS REPORT





12013 Dec2014 Ma2016 Jun2017 Dec2016 Ma2020 Jun2021 Sec2022

Sample Number Client Info ST43800 ST43500 ST44500 Sample Date Client Info 28 Sep 2023 28 Jun 2023 30 Mar 202 Machine Age hrs Client Info 0 0 0 Oll Age hrs Client Info 0 0 0 0 Oll Age hrs< Client Info N/A N/A N/A N/A Sample Status Im Client Info N/A N/A N/A N/A Chromium ppm ASTM 05185m >150 0 0 0 Chromium ppm ASTM 05185m >150 0 0 0 Silver ppm ASTM 05185m >250 0 0 0 Auminum ppm ASTM 05185m >250 0 0 0 Gapper ppm ASTM 05185m >25 0 0 0 Addmium pm ASTM 05185m >25 0 0 0	SAMPLE INFORM	IATION	method	limit/base	current	history1	history
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info N/A N/A N/A Sample Status Imath Sample Status Imath Sample Status ATTENTION ABNORMAL ATTENTION WEAR METALS method Imit/base current history1 history1 Iron ppm ASTM D5185m >200 21 20 19 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m >200 c1 -1 0 Copper ppm ASTM D5185m >200 c1 -1 0 Tin ppm ASTM D5185m >200 c1 -1 0 Copper ppm ASTM D5185m 26 0 0 0 Copper ppm ASTM D5185m 20 0 0	Sample Number		Client Info		ST43800	ST43505	ST44670
Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Client Info N/A ATTENTION ABNORMAL ATTENTION WEAR METALS method listop 21 20 19 Chromium ppm ASTM 05185m >200 21 20 19 Chromium ppm ASTM 05185m >15 0 -1 0 Nickel ppm ASTM 05185m >15 0 0 0 0 Auminum ppm ASTM 05185m >25 0 0 0 0 0 Copper ppm ASTM 05185m >25 0	Sample Date		Client Info		28 Sep 2023	28 Jun 2023	30 Mar 202
Oil Changed Client Info N/A N/A N/A N/A Sample Status method limit/base current history1 history1 WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >200 21 20 19 Chromium ppm ASTM D5185m >15 0 <1	Machine Age	hrs	Client Info		0	0	0
Sample Status Imathematical status ATTENTION ABNORMAL ATTENTIC WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >200 21 20 19 Chromium ppm ASTM D5185m >15 0 <1	Oil Age	hrs	Client Info		0	0	0
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m >0 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 0 Lead ppm ASTM D5185m >25 0 0 0 Cadmium ppm ASTM D5185m >20 <1	Oil Changed		Client Info		N/A	N/A	N/A
Iron ppm ASTM D5185m >200 21 20 19 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m >25 0 0 0 Aluminum ppm ASTM D5185m >200 <1	Sample Status				ATTENTION	ABNORMAL	ATTENTIC
Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 <1	WEAR METALS		method	limit/base	current	history1	history
Nickel ppm ASTM D5185m >15 0 <1 0 Titanium ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m >25 0 0 0 0 Aluminum ppm ASTM D5185m >200 <1	Iron	ppm	ASTM D5185m	>200	21	20	19
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m >25 0 0 Aluminum ppm ASTM D5185m >25 0 0 Lead ppm ASTM D5185m >200 <1	Chromium	ppm	ASTM D5185m	>15	0	0	0
Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >25 0 0 <1	Nickel	ppm	ASTM D5185m	>15	0	<1	0
Atuminum ppm ASTM D5185m >25 0 0 <1 Lead ppm ASTM D5185m >100 0 0 0 Copper ppm ASTM D5185m >200 <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >100 0 0 0 Copper ppm ASTM D5185m >200 <1	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >200 <1 <1 0 Tin ppm ASTM D5185m >25 0 0 0 Vanadium ppm ASTM D5185m >25 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 5 4 5 Barium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>25	0	0	<1
Tin ppm ASTM D5185m >25 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 5 4 5 Barium ppm ASTM D5185m <1	Lead	ppm	ASTM D5185m	>100	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history Boron ppm ASTM D5185m 5 4 5 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>200	<1	<1	0
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 5 4 5 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m <1 <1 0 Magnese ppm ASTM D5185m <1 <1 0 Magnesium ppm ASTM D5185m <1 0 1 Calcium ppm ASTM D5185m <263 271 304 Zinc ppm ASTM D5185m 263 271 304 Zinc ppm ASTM D5185m 9527 9599 11527 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >0 0 0 0 Sodium ppm ASTM D5185m >20 1 1	Tin	ppm	ASTM D5185m	>25	0	0	0
ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 5 4 5 Barium ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 5 4 5 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m <1 <1 0 Manganese ppm ASTM D5185m <1 0 1 <1 0 Magnesium ppm ASTM D5185m <1 0 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 <th< td=""><td>Cadmium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>0</th><td>0</td><td>0</td></th<>	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history
Molybdenum ppm ASTM D5185m <1 <1 0 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		5	4	5
Manganese ppm ASTM D5185m <1 <1 <1 Magnesium ppm ASTM D5185m <1 0 1 Calcium ppm ASTM D5185m <1 0 1 Calcium ppm ASTM D5185m 263 271 304 Zinc ppm ASTM D5185m 263 271 304 Sulfur ppm ASTM D5185m 263 271 304 Sulfur ppm ASTM D5185m 263 271 304 Sulfur ppm ASTM D5185m 9527 9599 11527 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 <1 <1 <1 Sodium ppm ASTM D5185m >20 1 <1 0 Water % ASTM D5185m >20 1 <1 0 0.001 ppm Water ppm ASTM D6304 >2000 78.5 81.8 14.6 FLUID CLEANLINESS m	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m <1 0 1 Calcium ppm ASTM D5185m 5 3 5 Phosphorus ppm ASTM D5185m 263 271 304 Zinc ppm ASTM D5185m 8 7 0 Sulfur ppm ASTM D5185m 9527 9599 11527 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >50 <1	Molybdenum	ppm	ASTM D5185m		<1	<1	0
Calcium ppm ASTM D5185m 5 3 5 Phosphorus ppm ASTM D5185m 263 271 304 Zinc ppm ASTM D5185m 9527 9599 11527 Sulfur ppm ASTM D5185m >50 <1 <1 <1 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 <1	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 263 271 304 Zinc ppm ASTM D5185m 8 7 0 Sulfur ppm ASTM D5185m 9527 9599 11527 CONTAMINANTS method limit/base current history1 history1 Sodium ppm ASTM D5185m >50 <1 <1 <1 Sodium ppm ASTM D5185m >50 <1 <1 <1 <1 Sodium ppm ASTM D5185m >20 1 <1 0 0 0 0 0 0 Vater % ASTM D6304 >0.2 0.007 0.008 0.001 0 pmm Water pmm ASTM D6304 >2000 78.5 81.8 14.6 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >40000 45247 67735 60878 Pa	Magnesium	ppm	ASTM D5185m		<1	0	1
Zinc ppm ASTM D5185m 8 7 0 Sulfur ppm ASTM D5185m 9527 9599 11527 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >50 <1	Calcium	ppm	ASTM D5185m		5	3	5
Sulfur ppm ASTM D5185m 9527 9599 11527 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >50 <1 <1 <1 Sodium ppm ASTM D5185m >50 <1 <1 <1 <1 Sodium ppm ASTM D5185m >20 1 <1 <1 0 Vater % ASTM D5185m >20 1 <1 0 Water % ASTM D6304 >0.2 0.007 0.008 0.001 ppm Water ppm ASTM D6304 >2000 78.5 81.8 14.6 FLUID CLEANLINESS method limit/base current history1 history Particles >4µm ASTM D7647 >40000 45247 67735 60878 Particles >14µm ASTM D7647 >5000 5037 10692 9274 Particles >21µm ASTM D7647 640 </td <td>Phosphorus</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>263</th> <td>271</td> <td>304</td>	Phosphorus	ppm	ASTM D5185m		263	271	304
CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >50 <1	Zinc	ppm	ASTM D5185m		8	7	0
Silicon ppm ASTM D5185m >50 <1	Sulfur	ppm	ASTM D5185m		9527	9599	11527
Sodium ppm ASTM D5185m O O O O Potassium ppm ASTM D5185m >20 1 <1	CONTAMINANTS	;	method	limit/base	current	history1	history
Sodium ppm ASTM D5185m 0 0 0 Potassium ppm ASTM D5185m >20 1 <1	Silicon	ppm	ASTM D5185m	>50	<1	<1	<1
Water % ASTM D6304 >0.2 0.007 0.008 0.001 ppm Water ppm ASTM D6304 >2000 78.5 81.8 14.6 FLUID CLEANLINESS method limit/base current history1 history Particles >4µm ASTM D7647 >40000 45247 67735 60878 Particles >6µm ASTM D7647 >5000 5037 10692 9274 Particles >14µm ASTM D7647 >640 58 131 103 Particles >21µm ASTM D7647 >160 6 15 11 Particles >38µm ASTM D7647 >40 1 1 1 Particles >71µm ASTM D7647 >10 0 0 0 0 Oil Cleanliness ISO 4406 (c) >22/19/16 23/20/13 23/21/14 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	Sodium	ppm	ASTM D5185m		0	0	0
ppm Water ppm ASTM D6304 >2000 78.5 81.8 14.6 FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >40000 45247 67735 60878 Particles >6µm ASTM D7647 >5000 5037 10692 9274 Particles >14µm ASTM D7647 >640 58 131 103 Particles >21µm ASTM D7647 >160 6 15 11 Particles >38µm ASTM D7647 >40 1 1 1 Particles >71µm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/20/13 23/21/14 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	Potassium	ppm	ASTM D5185m	>20	1	<1	0
FLUID CLEANLINESS method limit/base current history1 history1 Particles >4µm ASTM D7647 >40000 ▲ 45247 ▲ 67735 ▲ 60878 Particles >6µm ASTM D7647 >5000 ▲ 5037 ▲ 10692 ▲ 9274 Particles >14µm ASTM D7647 >640 58 131 103 Particles >21µm ASTM D7647 >160 6 15 11 Particles >21µm ASTM D7647 >40 1 1 1 Particles >38µm ASTM D7647 >40 1 1 1 Particles >71µm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/19/16 23/20/13 23/21/14 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	Water	%	ASTM D6304	>0.2	0.007	0.008	0.001
Particles >4µm ASTM D7647 >40000 ▲ 45247 ▲ 67735 ▲ 60878 Particles >6µm ASTM D7647 >5000 ▲ 5037 ▲ 10692 ● 9274 Particles >14µm ASTM D7647 >640 58 131 103 Particles >21µm ASTM D7647 >160 6 15 11 Particles >21µm ASTM D7647 >40 1 1 1 Particles >38µm ASTM D7647 >40 1 1 1 Particles >71µm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/219/16 ▲ 23/20/13 ▲ 23/21/14 ▲ 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	ppm Water	ppm	ASTM D6304	>2000	78.5	81.8	14.6
Particles >6µm ASTM D7647 >5000 5037 10692 9274 Particles >14µm ASTM D7647 >640 58 131 103 Particles >21µm ASTM D7647 >160 6 15 11 Particles >38µm ASTM D7647 >40 1 1 1 Particles >38µm ASTM D7647 >40 1 1 1 Particles >71µm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/19/16 23/20/13 23/21/14 23/20/14	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history
Particles >14µm ASTM D7647 >640 58 131 103 Particles >21µm ASTM D7647 >160 6 15 11 Particles >38µm ASTM D7647 >40 1 1 1 Particles >38µm ASTM D7647 >40 1 1 1 Particles >71µm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/19/16 23/20/13 23/21/14 23/20/14 FLUID DEGRADATION method limit/base current history1 history	Particles >4µm		ASTM D7647	>40000	45247	67735	60878
Particles >21µm ASTM D7647 >160 6 15 11 Particles >38µm ASTM D7647 >40 1 1 1 Particles >38µm ASTM D7647 >40 1 1 1 Particles >71µm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/19/16 23/20/13 23/21/14 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	Particles >6µm		ASTM D7647	>5000	<u> </u>	1 0692	A 9274
Particles >38μm ASTM D7647 >40 1 1 1 Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/19/16 23/20/13 23/21/14 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	Particles >14µm		ASTM D7647	>640	58	131	103
Particles >71μm ASTM D7647 >10 0 0 0 Oil Cleanliness ISO 4406 (c) >22/19/16 ▲ 23/20/13 ▲ 23/21/14 ▲ 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	Particles >21µm		ASTM D7647	>160	6	15	11
Oil Cleanliness ISO 4406 (c) >22/19/16 23/20/13 23/21/14 23/20/14 FLUID DEGRADATION method limit/base current history1 history1	Particles >38µm		ASTM D7647	>40	1	1	1
FLUID DEGRADATION method limit/base current history1 history	Particles >71µm		ASTM D7647	>10	0	0	0
	Oil Cleanliness		ISO 4406 (c)	>22/19/16	4 23/20/13	▲ 23/21/14	▲ 23/20/14
Acid Number (AN) mg KOH/g ASTM D8045 0.69 0.72	FLUID DEGRADA	TION	method	limit/base	current	history1	history
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.69	0.69	0.72

Machine Id SL-42 12A Component Gearbox Fluid ISO 68 (--- GAL)

DIAGNOSIS

A Recommendation

Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

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

Contact/Location: MARK MEDEIROS - ZAPDAR



Acid Number

1.00

8.8 (B/HOX Ê0.6 e 0.4 Pio 0.2

0.00

1000

6000 Water (

4000

200

200

100

5

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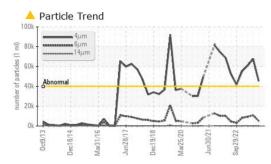
cSt (40°C)

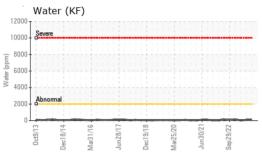
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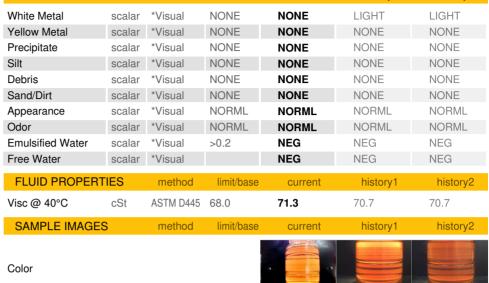
OIL ANALYSIS REPORT

method

VISUAL







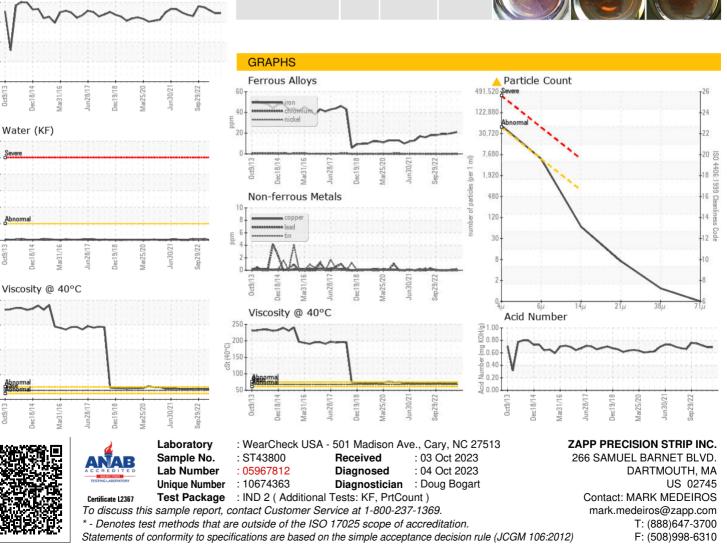
limit/base

current

history1

history2

Bottom



Report Id: ZAPDAR [WUSCAR] 05967812 (Generated: 10/05/2023 04:25:06) Rev: 1

Contact/Location: MARK MEDEIROS - ZAPDAR