

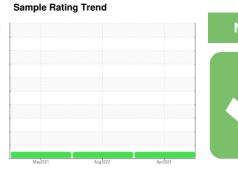
OIL ANALYSIS REPORT

ZANI

NEGRI BOSSI 25 - ZANI (S/N 371-166)

Hydraulic System

AW HYDRAULIC OIL ISO 46 (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

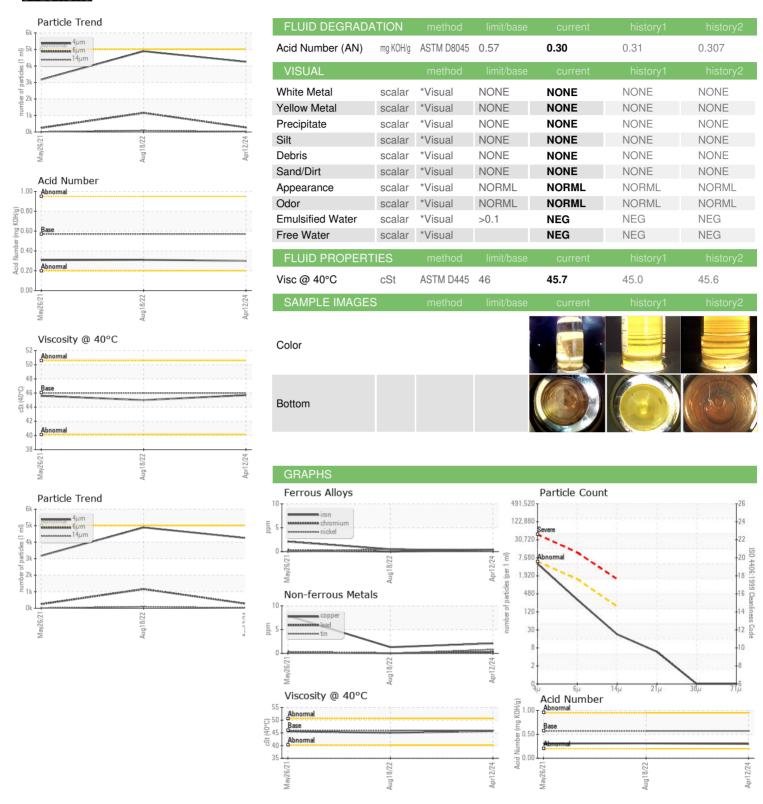
Fluid Condition

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

Sample Number							
Sample Date Client Info 12 Apr 2024 18 Aug 2022 26 May 2021	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0	Sample Number		Client Info		KFS0002834	KFS0001617	KFS0000510
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 N/A N/A N/A N/A CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1	Sample Date		Client Info		12 Apr 2024	18 Aug 2022	26 May 2021
Oil Changed Status	Machine Age	hrs	Client Info		0		0
Sample Status	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 <1 2 Chromium ppm ASTM D5185m >10 <1 0 <1 Nickel ppm ASTM D5185m >10 <1 0 0 Silver ppm ASTM D5185m <1 0 <1 1 Aluminum ppm ASTM D5185m >10 <1 0 <1 1 Lead ppm ASTM D5185m >10 <1 0 <1 1	Oil Changed		Client Info		N/A	N/A	N/A
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 <1 2 Chromium ppm ASTM D5185m >10 <1 0 <1 Nickel ppm ASTM D5185m >10 <1 0 0 Silver ppm ASTM D5185m >10 <1 0 <1 Aluminum ppm ASTM D5185m >10 <1 0 <1 Aluminum ppm ASTM D5185m >10 <1 0 <1 Lead ppm ASTM D5185m >10 <1 0 <1 Antimony ppm ASTM D5185m >10 <1 0 <1 Antimony ppm ASTM D5185m >10 0 0 <1 Vanadium ppm ASTM D5185m <1 0 0	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 <1 2 Chromium ppm ASTM D5185m >10 <1 0 <1 Nickel ppm ASTM D5185m >10 <1 <1 0 Titanium ppm ASTM D5185m >10 <1 0 <1 Aluminum ppm ASTM D5185m >10 3 <1 1 Lead ppm ASTM D5185m >10 <1 0 <1 Copper ppm ASTM D5185m >10 <1 0 <1 Tin ppm ASTM D5185m >10 <1 0 <1 Antimony ppm ASTM D5185m >10 <1 0 <1 Vanadium ppm ASTM D5185m <1 0 0 <1 Boron ppm ASTM D5185m <0 0 <1<	CONTAMINATION		method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium ppm ASTM D5185m >10 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	<1	<1	2
Titanium ppm ASTM D5185m <1 0 0 Silver ppm ASTM D5185m <1	Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Silver ppm ASTM D5185m <1 0 <1 Aluminum ppm ASTM D5185m >10 3 <1	Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Aluminum ppm ASTM D5185m >10 3 -1 1 Lead ppm ASTM D5185m >10 <1	Titanium	ppm	ASTM D5185m		<1	0	0
Lead ppm ASTM D5185m >10 <1 0 <1 Copper ppm ASTM D5185m >75 2 1 8 Tin ppm ASTM D5185m >10 <1 0 <1 Antimony ppm ASTM D5185m 0 0 Vanadium ppm ASTM D5185m <1 0 0 0 Cadmium ppm ASTM D5185m <1 0 0 <1 Boron ppm ASTM D5185m 5 0 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	Silver	ppm	ASTM D5185m		<1	0	<1
Copper ppm ASTM D5185m >75 2 1 8 Tin ppm ASTM D5185m >10 <1 0 <1 Antimony ppm ASTM D5185m 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 5 0 0 <1 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 <1 <1 <1 Magnesium ppm ASTM D5185m 25 1 1 1 1 Calcium ppm ASTM D5185m 20 40 49 42 42 Phosphorus ppm ASTM D5185m 370 412 448 395	Aluminum	ppm	ASTM D5185m	>10	3	<1	1
Tin ppm ASTM D5185m >10 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0	Lead	ppm	ASTM D5185m	>10	<1	0	<1
Antimony ppm ASTM D5185m 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 5 0 0 <1 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 <1 <1 <1 Manganese ppm ASTM D5185m 25 1 1 1 1 Magnesium ppm ASTM D5185m 200 40 49 42 Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 <th>Copper</th> <th>ppm</th> <th>ASTM D5185m</th> <th>>75</th> <th>2</th> <th>1</th> <th>8</th>	Copper	ppm	ASTM D5185m	>75	2	1	8
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 5 0 0 <1 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 <1 <1 <1 Manganese ppm ASTM D5185m 5 <1 <1 <1 Magnesium ppm ASTM D5185m 25 1 1 1 1 Calcium ppm ASTM D5185m 200 40 49 42 24 Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current	Tin	ppm	ASTM D5185m	>10	<1	0	<1
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 <1	Antimony	ppm	ASTM D5185m				0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 <1	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron ppm ASTM D5185m 5 0 0 <1	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 <1 <1 <1 Manganese ppm ASTM D5185m 25 1 1 1 Magnesium ppm ASTM D5185m 200 40 49 42 Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >20 2 <1 0 Potassium ppm ASTM D5185m >20 2 <1 0 FLUID CLEANLINESS method limit/base<	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 5 <1 <1 <1 Manganese ppm ASTM D5185m <1 0 <1 Magnesium ppm ASTM D5185m 25 1 1 1 Calcium ppm ASTM D5185m 200 40 49 42 Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >20 2 <1 0 Potassium ppm ASTM D5185m >20 2 <1 0 FLUID CLEANLINESS method limit/base <th< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td>5</td><th>0</th><td>0</td><td><1</td></th<>	Boron	ppm	ASTM D5185m	5	0	0	<1
Manganese ppm ASTM D5185m <1 0 <1 Magnesium ppm ASTM D5185m 25 1 1 1 Calcium ppm ASTM D5185m 200 40 49 42 Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >20 2 <1	Barium	ppm	ASTM D5185m	5	0	0	0
Magnesium ppm ASTM D5185m 25 1 1 1 Calcium ppm ASTM D5185m 200 40 49 42 Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >20 2 <1	Molybdenum	ppm	ASTM D5185m	5	<1	<1	<1
Calcium ppm ASTM D5185m 200 40 49 42 Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >20 2 <1	Manganese	ppm	ASTM D5185m		<1	0	<1
Phosphorus ppm ASTM D5185m 300 331 330 339 Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >20 2 <1	Magnesium	ppm	ASTM D5185m	25	1	1	1
Zinc ppm ASTM D5185m 370 412 448 395 Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >20 2 <1	Calcium	ppm	ASTM D5185m	200	40	49	42
Sulfur ppm ASTM D5185m 2500 870 1074 1438 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m >0 0 0 Potassium ppm ASTM D5185m >20 2 <1	Phosphorus	ppm	ASTM D5185m	300	331	330	339
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m 0 0 0 Potassium ppm ASTM D5185m >20 2 <1	Zinc	ppm	ASTM D5185m	370	412	448	395
Silicon ppm ASTM D5185m >20 1 1 1 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 2 <1	Sulfur	ppm	ASTM D5185m	2500	870	1074	1438
Sodium ppm ASTM D5185m 0 0 0 Potassium ppm ASTM D5185m >20 2 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 4249 4890 3176 Particles >6μm ASTM D7647 >1300 271 1159 247 Particles >14μm ASTM D7647 >160 19 90 12 Particles >21μm ASTM D7647 >40 5 26 4 Particles >38μm ASTM D7647 >10 0 3 0 Particles >71μm ASTM D7647 >3 0 0 0	Silicon	ppm	ASTM D5185m	>20	1	1	1
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 4249 4890 3176 Particles >6μm ASTM D7647 >1300 271 1159 247 Particles >14μm ASTM D7647 >160 19 90 12 Particles >21μm ASTM D7647 >40 5 26 4 Particles >38μm ASTM D7647 >10 0 3 0 Particles >71μm ASTM D7647 >3 0 0 0	Sodium	ppm	ASTM D5185m		0	0	0
Particles >4μm ASTM D7647 >5000 4249 4890 3176 Particles >6μm ASTM D7647 >1300 271 1159 247 Particles >14μm ASTM D7647 >160 19 90 12 Particles >21μm ASTM D7647 >40 5 26 4 Particles >38μm ASTM D7647 >10 0 3 0 Particles >71μm ASTM D7647 >3 0 0	Potassium	ppm	ASTM D5185m	>20	2	<1	0
Particles >6μm ASTM D7647 >1300 271 1159 247 Particles >14μm ASTM D7647 >160 19 90 12 Particles >21μm ASTM D7647 >40 5 26 4 Particles >38μm ASTM D7647 >10 0 3 0 Particles >71μm ASTM D7647 >3 0 0	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >160 19 90 12 Particles >21μm ASTM D7647 >40 5 26 4 Particles >38μm ASTM D7647 >10 0 3 0 Particles >71μm ASTM D7647 >3 0 0	Particles >4µm		ASTM D7647	>5000	4249	4890	3176
Particles >21μm ASTM D7647 >40 5 26 4 Particles >38μm ASTM D7647 >10 0 3 0 Particles >71μm ASTM D7647 >3 0 0 0	Particles >6µm		ASTM D7647	>1300	271	1159	247
Particles >38μm ASTM D7647 >10 0 3 0 Particles >71μm ASTM D7647 >3 0 0 0	Particles >14µm		ASTM D7647	>160	19	90	12
Particles >71μm ASTM D7647 >3 0 0	Particles >21µm		ASTM D7647	>40	5	26	4
	Particles >38µm		ASTM D7647	>10	0	3	0
Oil Cleanliness ISO 4406 (c) >19/17/14 19/15/11 19/17/14 19/15/11	Particles > 71um		ASTM D7647	\3	n	0	0
	ranicies >1 IµIII		AOTIVI DI OTI	70	U	U	U



OIL ANALYSIS REPORT







Laboratory Sample No.

Lab Number : 06156882

: KFS0002834 Unique Number : 10992305

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Apr 2024 **Tested** : 23 Apr 2024

Diagnosed : 23 Apr 2024 - Wes Davis

Test Package : IND 2 Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

 st - 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)

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Submitted By: Jay Segadi

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