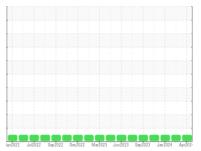


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id

NEGRI BOSSI P13

Hydraulic System

AW HYDRAULIC OIL ISO 68 (--- QTS)

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with 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.

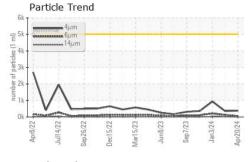
Fluid Condition

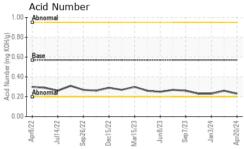
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

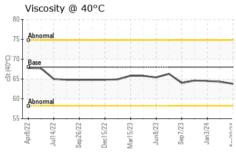
SAMPLE INFORMATION method limit/bass current history1 history2			Apr2022 Jul20	022 Sep2022 Dec2022	Mar2023 Jun2023 Sep2023 Jan.	2024 Apr2024	
Sample Date Client Info 20 Apr 2024 20 Feb 2024 03 Jan 2024 Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Oil Changed Client Info 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 05185m >10 0 <1	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0	Sample Number		Client Info		PTK0005492	PTK0005476	PTK0005093
Oil Age hrs Client Info N/A N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 0 <1	Sample Date		Client Info		20 Apr 2024	20 Feb 2024	03 Jan 2024
Oil Changed Sample Status Client Info N/A NORMAL NORMAL NORMAL N/A NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL <t< th=""><th>Machine Age</th><th>hrs</th><th>Client Info</th><th></th><th>0</th><th>0</th><th>0</th></t<>	Machine Age	hrs	Client Info		0	0	0
Sample Status NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		0	0	0
Water WC Method Sol.1 NEG NEG NEG NEG	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 0 <1	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS	CONTAMINATIO	V	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium ppm ASTM D5185m >10 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >10 0 0 0 Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 0 Lead ppm ASTM D5185m >10 0 0 0 0 Copper ppm ASTM D5185m >75 6 5 4 4 1 0	Iron	ppm	ASTM D5185m	>20	0	<1	0
Titanium	Chromium	ppm	ASTM D5185m	>10	0	<1	0
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >10 0 0 0 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >75 6 5 4 Tin ppm ASTM D5185m >10 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 history2 Boron ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 0 Barium ppm ASTM D5185m 5 0 0 0	Nickel	ppm	ASTM D5185m	>10	0	0	0
Aluminum ppm ASTM D5185m >10 0 0 0 Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >75 6 5 4 Tin ppm ASTM D5185m >10 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 history2 Boron ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganesium ppm ASTM D5185m 5 0 0 0 Manganesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 25 0 2 0<	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >10 0 0 0 Copper ppm ASTM D5185m >75 6 5 4 Tin ppm ASTM D5185m >10 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 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 20 383 385 356 <th>Silver</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >75 6 5 4 Tin ppm ASTM D5185m >10 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 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 25 0 2 0 0 Calcium ppm ASTM D5185m 25 0 2 0 0 Phosphorus ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 <	Aluminum	ppm	ASTM D5185m	>10	0	0	0
Tin ppm ASTM D5185m >10 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 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 25 0 0 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 200 346 321 303 Zinc ppm ASTM D5185m 2500 2752 2802	Lead	ppm	ASTM D5185m	>10	0	0	0
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 25 0 0 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 200 346 321 303 Zinc ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 </th <th>Copper</th> <th>ppm</th> <th>ASTM D5185m</th> <th>>75</th> <th>6</th> <th>5</th> <th>4</th>	Copper	ppm	ASTM D5185m	>75	6	5	4
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 200 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m >2500 2752 2802 2312 CONTAMINANTS method limit/base current	Tin	ppm	ASTM D5185m	>10	0	0	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 300 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 Sodium ppm ASTM D5185m >20 0	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 5 0 0 0 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 25 0 2 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 200 346 321 303 Zinc ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 5 0 0 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 300 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 Sodium ppm ASTM D5185m >20 1 1 <1 Potassium ppm ASTM D5185m >20 0 <1 0 FLUID CLEANLINESS method limit/base current <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 5 0 0 0 Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 300 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1	Boron	ppm	ASTM D5185m	5	0	0	0
Manganese ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 200 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1	Barium	ppm	ASTM D5185m	5	0	0	0
Magnesium ppm ASTM D5185m 25 0 2 0 Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 300 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 <1 Sodium ppm ASTM D5185m >20 0 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 380 355 937 Particles >14μm ASTM D7647 >160 4 17 20 Particl	Molybdenum	ppm	ASTM D5185m	5	0	0	0
Calcium ppm ASTM D5185m 200 52 47 38 Phosphorus ppm ASTM D5185m 300 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 <1 Sodium ppm ASTM D5185m >20 1 1 <1 <1 <1 Sodium ppm ASTM D5185m >20 0 <1 0 Potassium ppm ASTM D5185m >20 0 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >1300 380 355 937 Pa	Manganese	ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 300 346 321 303 Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 <1 Sodium ppm ASTM D5185m >20 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	Magnesium	ppm	ASTM D5185m	25	0	2	0
Zinc ppm ASTM D5185m 370 383 385 356 Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 Sodium ppm ASTM D5185m >20 0 <1 <1 Potassium ppm ASTM D5185m >20 0 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 380 355 937 Particles >6μm ASTM D7647 >1300 54 123 216 Particles >14μm ASTM D7647 >40 1 5 6 Particles >21μm ASTM D7647 >40 1 5 6 Particles >71μm ASTM D7647 >3 0 0 0	Calcium	ppm	ASTM D5185m	200	52	47	38
Sulfur ppm ASTM D5185m 2500 2752 2802 2312 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 Sodium ppm ASTM D5185m >20 0 <1 <1 Potassium ppm ASTM D5185m >20 0 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 380 355 937 Particles >6µm ASTM D7647 >1300 54 123 216 Particles >14µm ASTM D7647 >160 4 17 20 Particles >21µm ASTM D7647 >40 1 5 6 Particles >71µm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Phosphorus	ppm	ASTM D5185m	300	346	321	303
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 1 1 <1 Sodium ppm ASTM D5185m >20 0 <1 <1 Potassium ppm ASTM D5185m >20 0 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 380 355 937 Particles >6μm ASTM D7647 >1300 54 123 216 Particles >14μm ASTM D7647 >160 4 17 20 Particles >21μm ASTM D7647 >40 1 5 6 Particles >38μm ASTM D7647 >10 1 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Zinc	ppm	ASTM D5185m	370	383	385	356
Silicon ppm ASTM D5185m >20 1 1 <1	Sulfur	ppm	ASTM D5185m	2500	2752	2802	2312
Sodium ppm ASTM D5185m <1	CONTAMINANTS	;	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 <1	Silicon	ppm	ASTM D5185m	>20	1	1	<1
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 380 355 937 Particles >6μm ASTM D7647 >1300 54 123 216 Particles >14μm ASTM D7647 >160 4 17 20 Particles >21μm ASTM D7647 >40 1 5 6 Particles >38μm ASTM D7647 >10 1 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Sodium	ppm	ASTM D5185m		<1	<1	<1
Particles >4μm ASTM D7647 >5000 380 355 937 Particles >6μm ASTM D7647 >1300 54 123 216 Particles >14μm ASTM D7647 >160 4 17 20 Particles >21μm ASTM D7647 >40 1 5 6 Particles >38μm ASTM D7647 >10 1 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Potassium	ppm	ASTM D5185m	>20	0	<1	0
Particles >6μm ASTM D7647 >1300 54 123 216 Particles >14μm ASTM D7647 >160 4 17 20 Particles >21μm ASTM D7647 >40 1 5 6 Particles >38μm ASTM D7647 >10 1 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14μm ASTM D7647 >160 4 17 20 Particles >21μm ASTM D7647 >40 1 5 6 Particles >38μm ASTM D7647 >10 1 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Particles >4µm		ASTM D7647	>5000	380	355	937
Particles >21μm ASTM D7647 >40 1 5 6 Particles >38μm ASTM D7647 >10 1 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Particles >6µm		ASTM D7647	>1300	54	123	216
Particles >38μm ASTM D7647 >10 1 0 0 Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Particles >14µm		ASTM D7647	>160	4	17	20
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Particles >21μm		ASTM D7647	>40	1	5	6
Particles >71μm ASTM D7647 >3 0 0 0 Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	Particles >38µm		ASTM D7647	>10	1	0	0
Oil Cleanliness ISO 4406 (c) >19/17/14 16/13/9 16/14/11 17/15/11	•		ASTM D7647	>3	0	0	0
FLUID DEGRADATION method limit/base current history1 history2	·				16/13/9	16/14/11	17/15/11
			. ,				

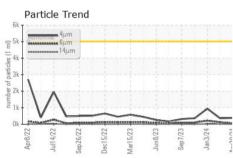


OIL ANALYSIS REPORT









VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPER	TIES	method				history2
Visc @ 40°C	cSt	ASTM D445	68	63.8	64.28	64.5

SAMF	PLE IN	ИAG	ES	



Bottom

Color



Particle Count

491 520

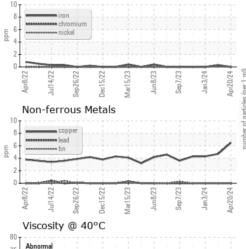
흘 0.40 툴 0.20

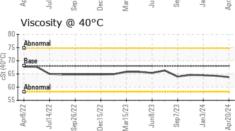
0.00 Acid

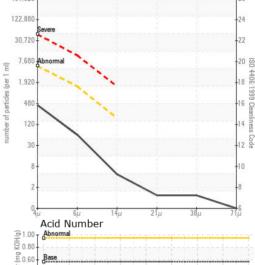
















Certificate 12367

Laboratory Sample No.

Lab Number : 06206451

: PTK0005492 Unique Number : 11073912 Test Package : MOB 2

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

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Jun 2024

Tested : 13 Jun 2024 Diagnosed

: 13 Jun 2024 - Wes Davis

US 55449 Contact: MIKE METHER mmether@generalpattern.com

GENERAL PATTERN

3075 84TH LN NE

BLAINE, MN

T:

F:

* - 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)

Report Id: GENBLA [WUSCAR] 06206451 (Generated: 06/13/2024 08:23:54) Rev: 1

Contact/Location: MIKE METHER - GENBLA