



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**Store 3 - Norton**  
Machine Id  
**JOHN DEERE 210G EX12 (S/N 1FF210GXLJF526866)**  
Component  
**Hydraulic System**  
Fluid  
**HITACHI HYDRAULIC SUPER EX 46HN (63 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LEC0045328</b>	LEC0042517	LEC0039972
Sample Date		Client Info		<b>23 Dec 2023</b>	26 Jun 2023	16 Feb 2023
Machine Age	hrs	Client Info		<b>3266</b>	2787	2287
Oil Age	hrs	Client Info		<b>3266</b>	2787	2287
Filter Age	hrs	Client Info		<b>500</b>	1000	0
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	<b>12</b>	14	9
Iron	ppm	ASTM D5185m	>32	<b>2</b>	6	3
Chromium	ppm	ASTM D5185m	>9	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>2</b>	2	<1
Lead	ppm	ASTM D5185m	>28	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	24	21
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

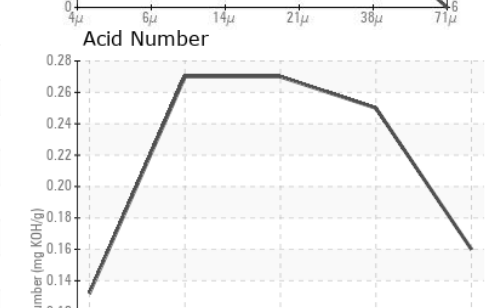
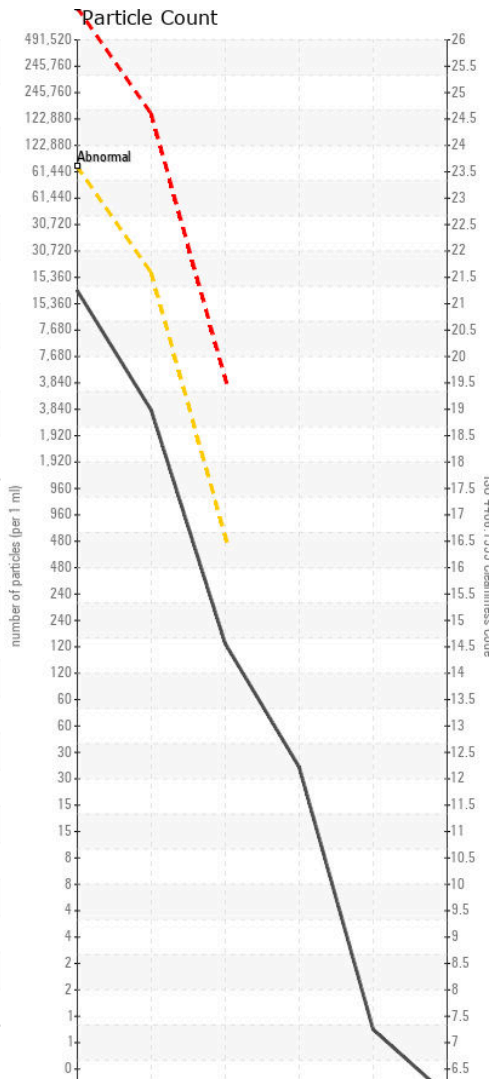
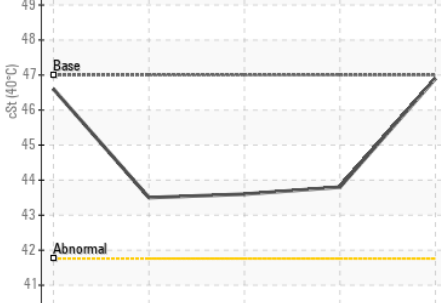
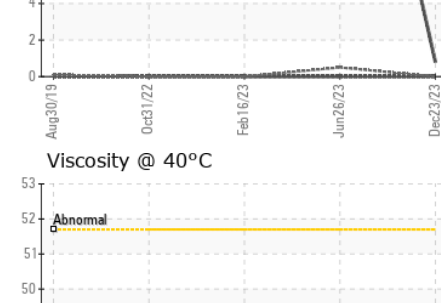
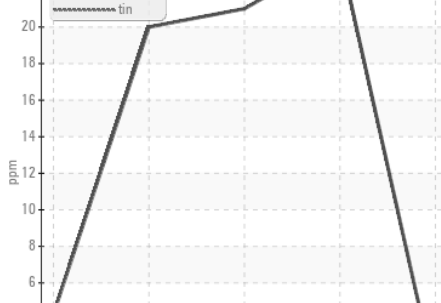
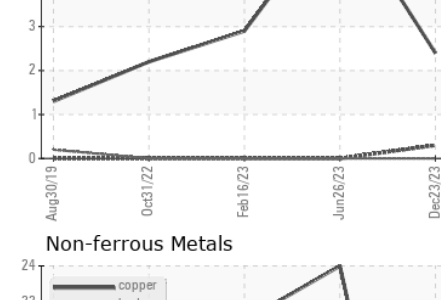
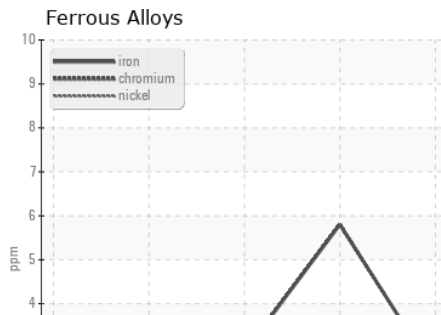
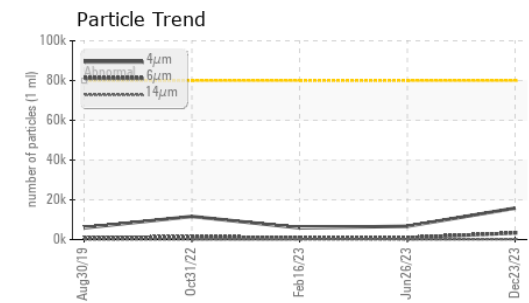
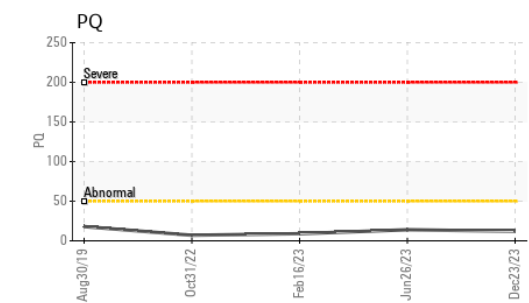
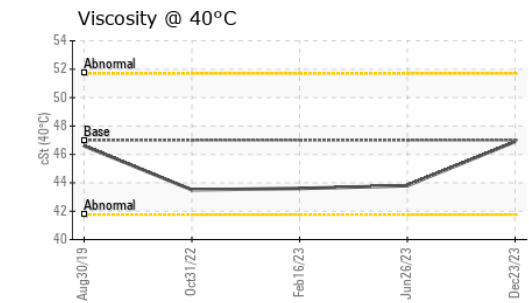
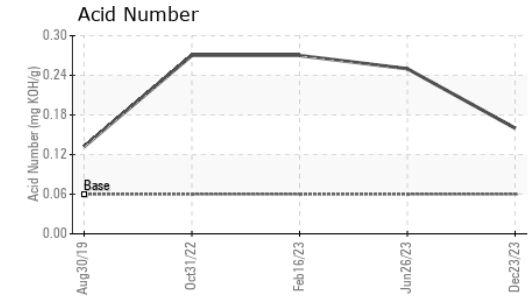
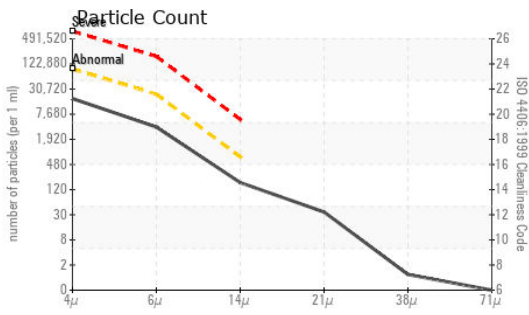
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>11	<b>&lt;1</b>	1	<1
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	1
Water		WC Method	>0.075	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>80000	<b>15801</b>	6708	5918
Particles >6µm		ASTM D7647	>20000	<b>3306</b>	975	989
Particles >14µm		ASTM D7647	>640	<b>156</b>	77	90
Particles >21µm		ASTM D7647	>160	<b>31</b>	16	25
Particles >38µm		ASTM D7647	>40	<b>1</b>	1	2
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	<b>21/19/14</b>	20/17/13	20/17/14
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.075	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>21	<b>0</b>	0	0
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>3</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>0</b>	0	0
Calcium	ppm	ASTM D5185m		<b>2</b>	12	<1
Phosphorus	ppm	ASTM D5185m	827	<b>572</b>	474	440
Zinc	ppm	ASTM D5185m	0	<b>0</b>	71	71
Sulfur	ppm	ASTM D5185m	13	<b>73</b>	407	360
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	<b>0.16</b>	0.25	0.27
Visc @ 40°C	cSt	ASTM D445	47	<b>46.9</b>	43.8	43.6



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0045328 **Received** : 17 Jan 2024  
**Lab Number** : 06063509 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834891 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

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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)