



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[140964]
 Machine Id
JOHN DEERE 210G 1FF210GXCMF529694
 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		LEC0041065	LEC0040782	LEC0041851
Sample Date		Client Info		01 Aug 2023	16 Jun 2023	31 May 2023
Machine Age	hrs	Client Info		905	866	831
Oil Age	hrs	Client Info		905	866	831
Filter Age	hrs	Client Info		74	35	831
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184	>50	13	12	12
Iron	ppm	ASTM D5185m	>32	1	1	15
Chromium	ppm	ASTM D5185m	>9	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	<1	4
Lead	ppm	ASTM D5185m	>28	0	<1	1
Copper	ppm	ASTM D5185m	>50	<1	2	2
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

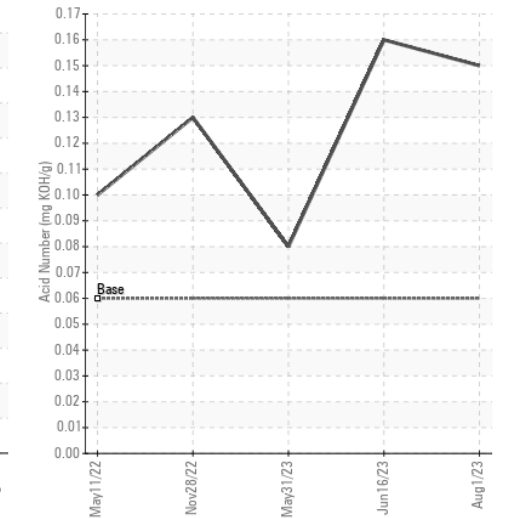
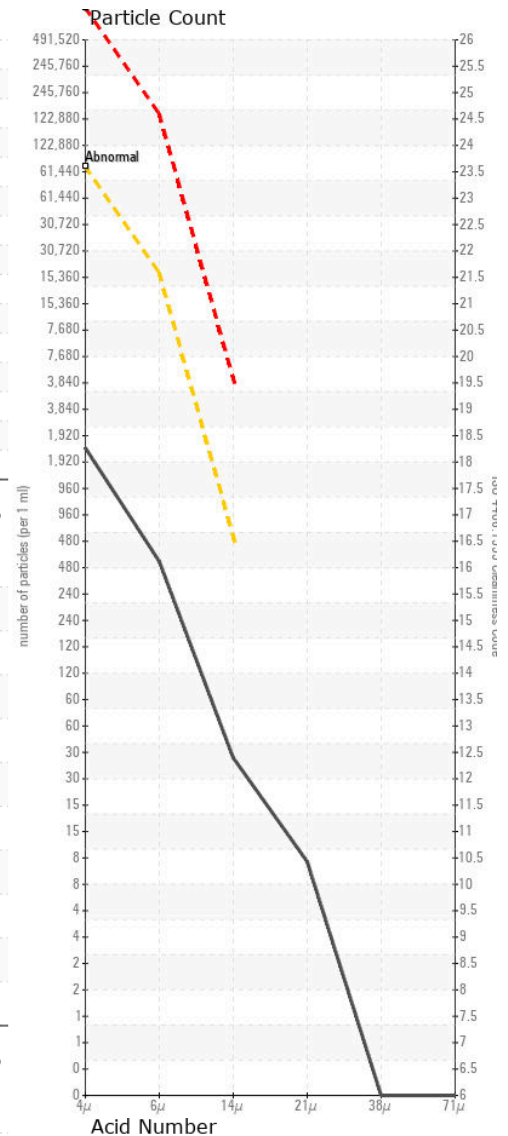
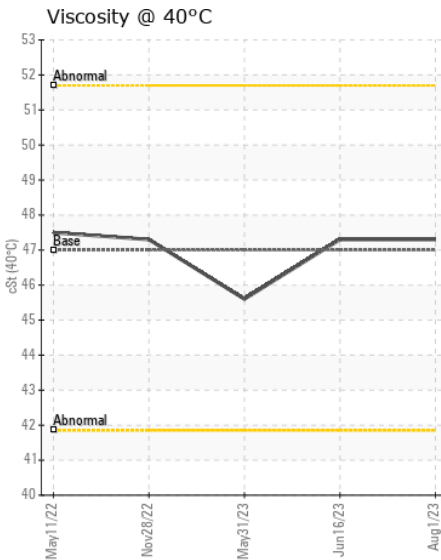
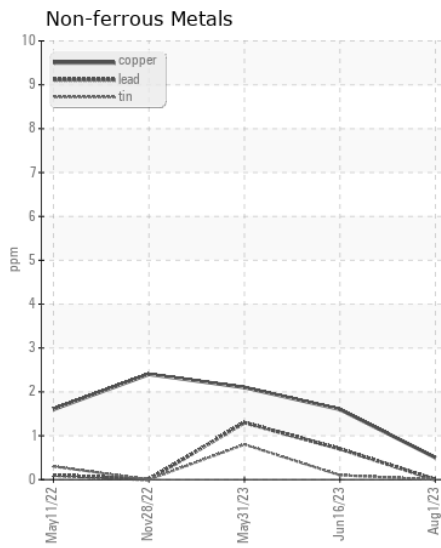
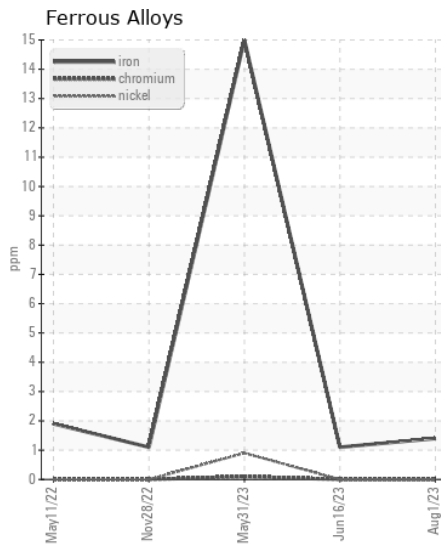
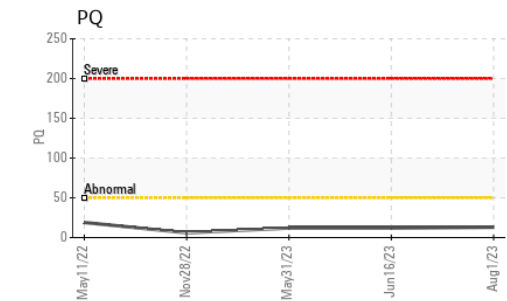
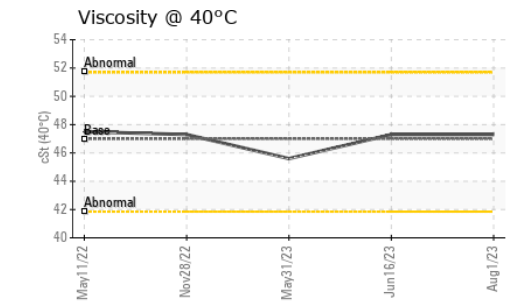
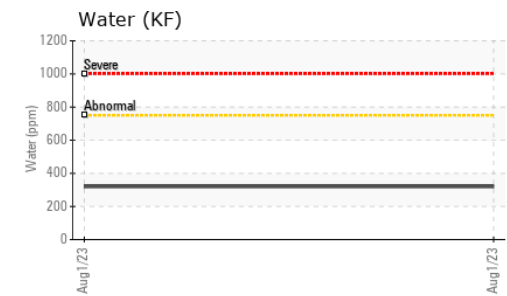
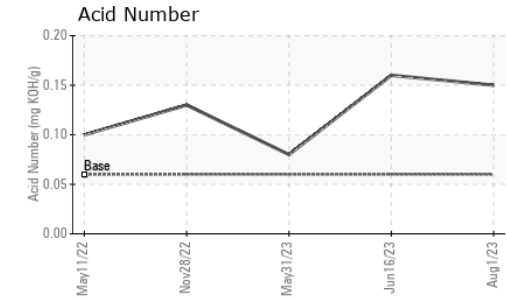
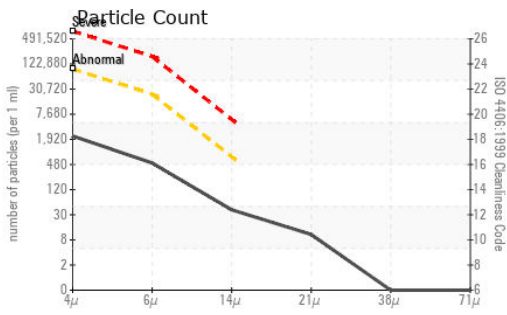
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>11	<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	2	3
Water	%	ASTM D6304	>0.075	0.032	---	---
ppm Water	ppm	ASTM D6304	>750	320	---	---
Particles >4µm		ASTM D7647	>80000	2021	1430	1635
Particles >6µm		ASTM D7647	>20000	458	188	373
Particles >14µm		ASTM D7647	>640	35	16	21
Particles >21µm		ASTM D7647	>160	9	6	5
Particles >38µm		ASTM D7647	>40	0	0	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	18/16/12	18/15/11	18/16/12
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	>0.075	0.2%	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	0	<1	1
Boron	ppm	ASTM D5185m		0	0	10
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		2	1	<1
Calcium	ppm	ASTM D5185m		12	17	25
Phosphorus	ppm	ASTM D5185m	827	531	547	535
Zinc	ppm	ASTM D5185m	0	31	34	33
Sulfur	ppm	ASTM D5185m	13	156	133	0
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.15	0.16	0.08
Visc @ 40°C	cSt	ASTM D445	47	47.3	47.3	45.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0041065 **Received** : 03 Aug 2023
Lab Number : 05914428 **Tested** : 04 Aug 2023
Unique Number : 10586342 **Diagnosed** : 04 Aug 2023 - Don Baldrige
Test Package : CONST (Additional Tests: KF, 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)