



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Area
[W63109]
 Machine Id
JOHN DEERE 210G 1FF210GXHJF526691
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil. (Customer Sample Comment: W63109)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0198597	JR0188699	JR0178699
Sample Date		Client Info		16 Jan 2024	18 Sep 2023	17 Aug 2023
Machine Age	hrs	Client Info		3539	3123	2989
Oil Age	hrs	Client Info		416	1634	1850
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Changed	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	16	11	20
Iron	ppm	ASTM D5185m	>32	3	4	8
Chromium	ppm	ASTM D5185m	>9	0	0	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	4
Lead	ppm	ASTM D5185m	>28	0	0	0
Copper	ppm	ASTM D5185m	>50	12	9	18
Tin	ppm	ASTM D5185m	>5	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	LIGHT	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

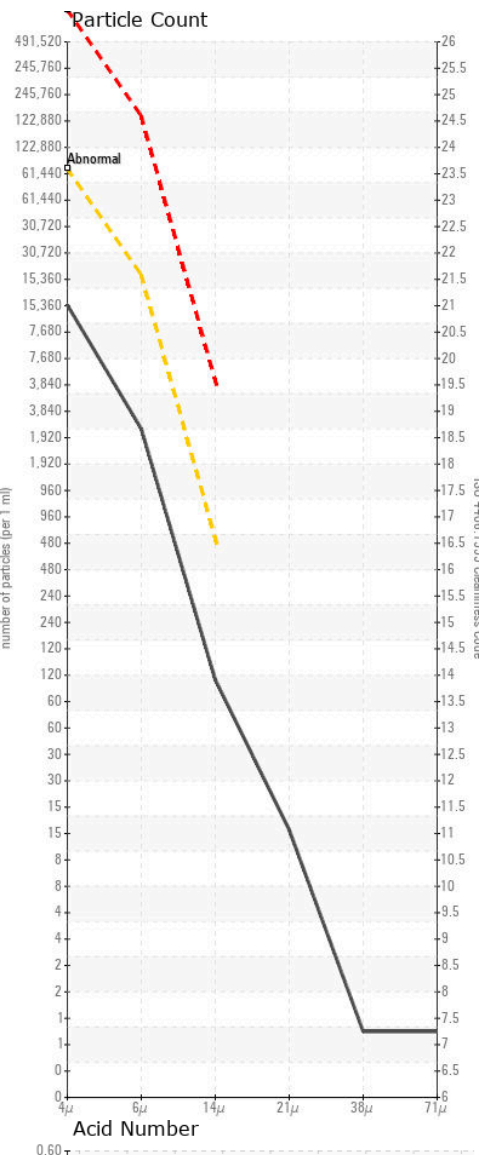
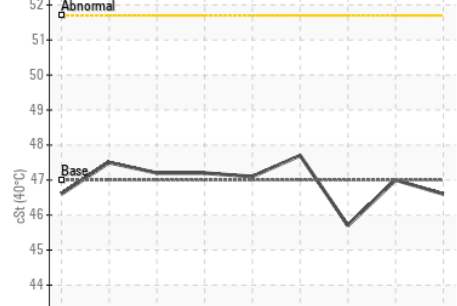
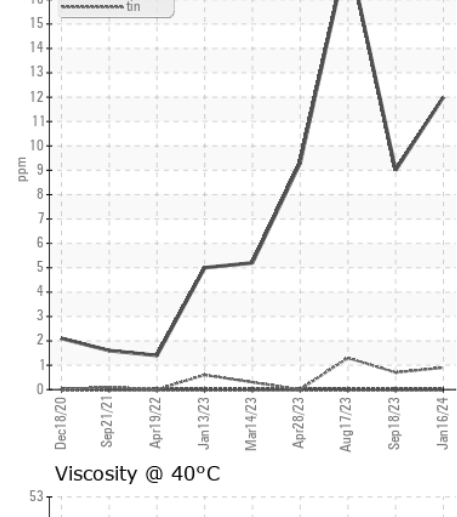
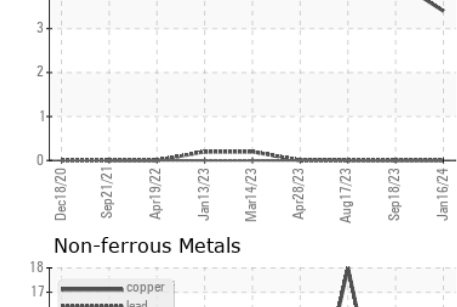
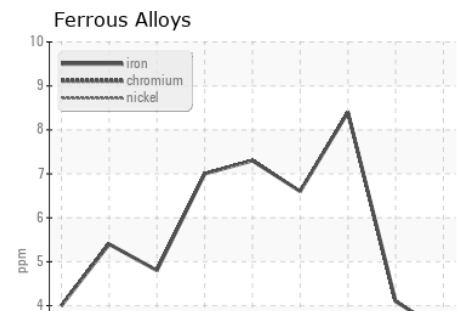
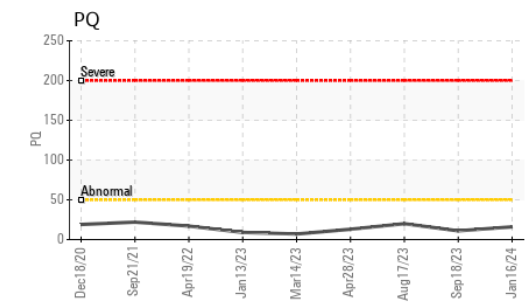
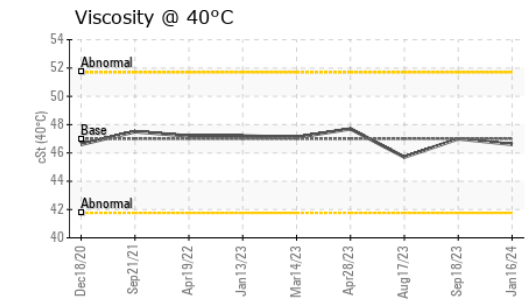
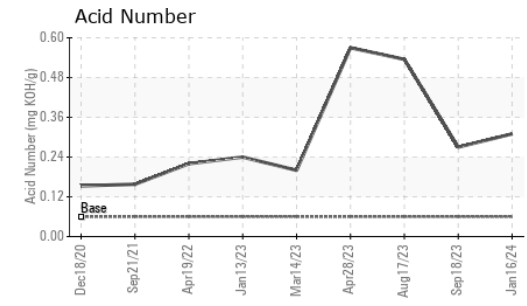
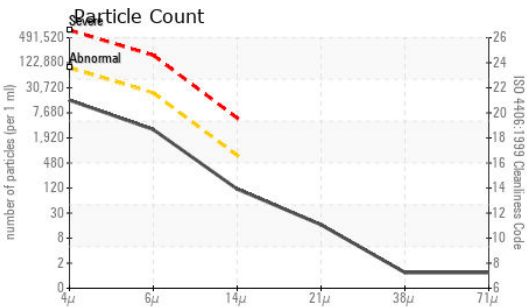
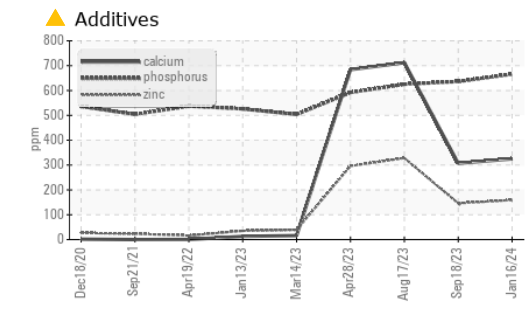
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	3	3	4
Potassium	ppm	ASTM D5185m	>20	<1	<1	1
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	13462	6938	33430
Particles >6µm		ASTM D7647	>20000	2662	706	7027
Particles >14µm		ASTM D7647	>640	100	34	▲ 818
Particles >21µm		ASTM D7647	>160	14	9	▲ 280
Particles >38µm		ASTM D7647	>40	1	1	8
Particles >71µm		ASTM D7647	>10	1	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	21/19/14	20/17/12	▲ 22/20/17
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
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	NEG	NEG	NEG

FLUID CONDITION

Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	<1	0	<1
Boron	ppm	ASTM D5185m		3	3	8
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	4	9
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		16	13	28
Calcium	ppm	ASTM D5185m		325	307	712
Phosphorus	ppm	ASTM D5185m	827	666	636	625
Zinc	ppm	ASTM D5185m	0	▲ 159	▲ 146	▲ 328
Sulfur	ppm	ASTM D5185m	13	505	467	1134
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.31	0.27	0.535
Visc @ 40°C	cSt	ASTM D445	47	46.6	47.0	45.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0198597 **Received** : 18 Jan 2024
Lab Number : 06064199 **Diagnosed** : 20 Jan 2024
Unique Number : 10835581 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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Certificate L2367
 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)