



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Area
[7937]
 Machine Id
JOHN DEERE 210G 3601411 (S/N 520918)
 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: 7937)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0130633	JR0033735	JR0078893
Sample Date		Client Info		24 May 2022	13 Jan 2022	01 Apr 2021
Machine Age	hrs	Client Info		10484	9975	9036
Oil Age	hrs	Client Info		509	4000	0
Filter Age	hrs	Client Info		0	939	0
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Not Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	14	18	14
Iron	ppm	ASTM D5185m	>32	6	10	8
Chromium	ppm	ASTM D5185m	>9	1	2	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		1	0	<1
Aluminum	ppm	ASTM D5185m	>9	2	3	2
Lead	ppm	ASTM D5185m	>28	<1	0	<1
Copper	ppm	ASTM D5185m	>50	2	4	3
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

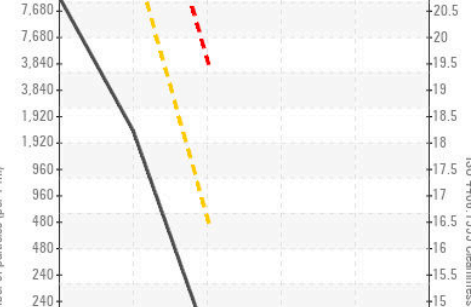
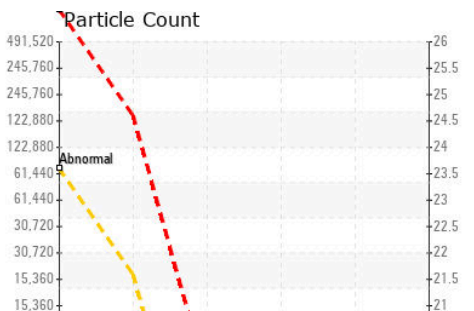
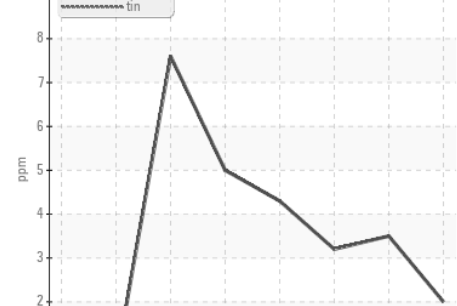
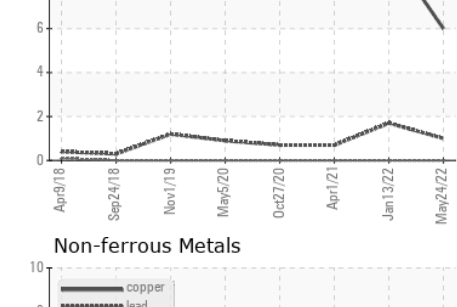
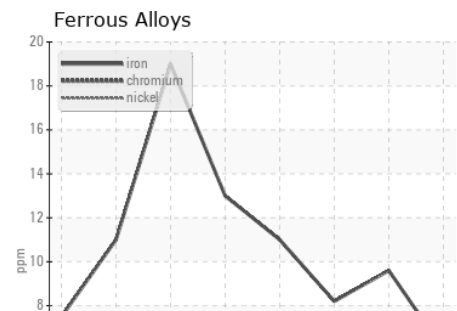
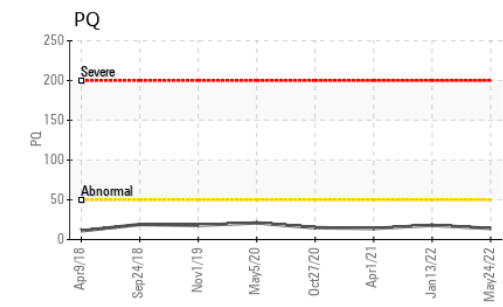
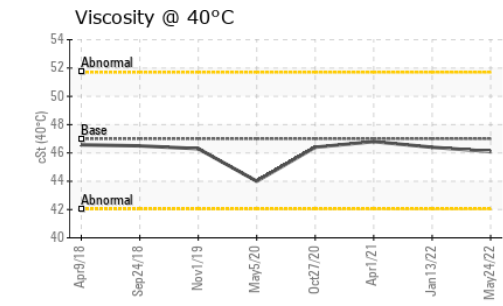
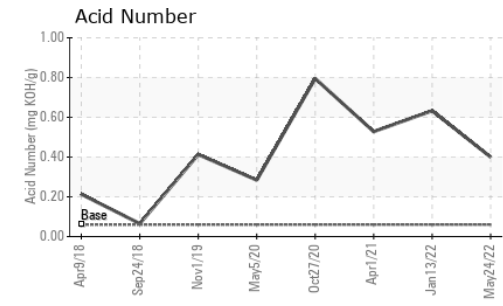
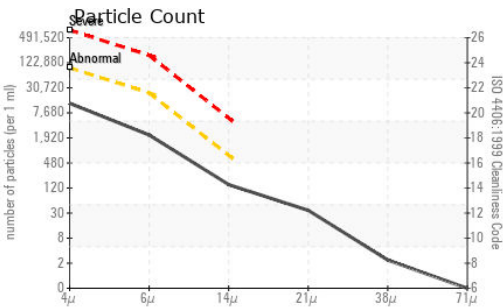
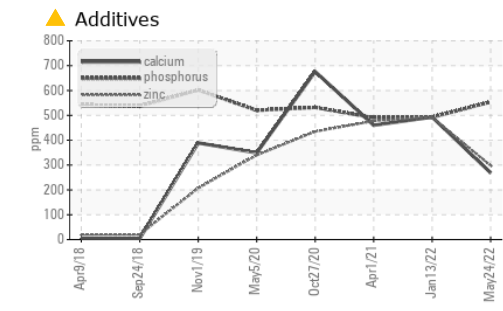
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	3	6	4
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	11342	109951	10653
Particles >6µm		ASTM D7647	>20000	1971	12032	592
Particles >14µm		ASTM D7647	>640	128	200	42
Particles >21µm		ASTM D7647	>160	31	36	13
Particles >38µm		ASTM D7647	>40	2	2	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	21/18/14	24/21/15	21/16/13
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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	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	5	2
Boron	ppm	ASTM D5185m		8	13	8
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	5	4
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		23	34	29
Calcium	ppm	ASTM D5185m		269	493	460
Phosphorus	ppm	ASTM D5185m	827	554	492	490
Zinc	ppm	ASTM D5185m	0	▲ 298	▲ 492	▲ 477
Sulfur	ppm	ASTM D5185m	13	640	1097	806
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.40	0.633	0.528
Visc @ 40°C	cSt	ASTM D445	47	46.1	46.4	46.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0130633 **Received** : 26 May 2022
Lab Number : 05554713 **Tested** : 27 May 2022
Unique Number : 9994101 **Diagnosed** : 27 May 2022 - Jonathan Hester
Test Package : CONST (Additional Tests: PQ)

JRE - NEW BERN
 3816 MARTIN LUTHER KING BLVD
 NEW BERN, NC
 US 28562
 Contact: JEFF BROWN
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 F: (252)638-2949

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)