



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
[W66860]

Machine Id
JOHN DEERE 470G 1FF470GXEJF235245

Component
Hydraulic System

Fluid
HITACHI HYDRAULIC SUPER EX 46HN (80 GAL)

RECOMMENDATION

(Customer Sample Comment: W66860)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0215001	JR0188046	JR0171941
Sample Date		Client Info		08 May 2024	26 Oct 2023	02 Jun 2023
Machine Age	hrs	Client Info		4605	4075	3486
Oil Age	hrs	Client Info		530	4075	1495
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Not Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

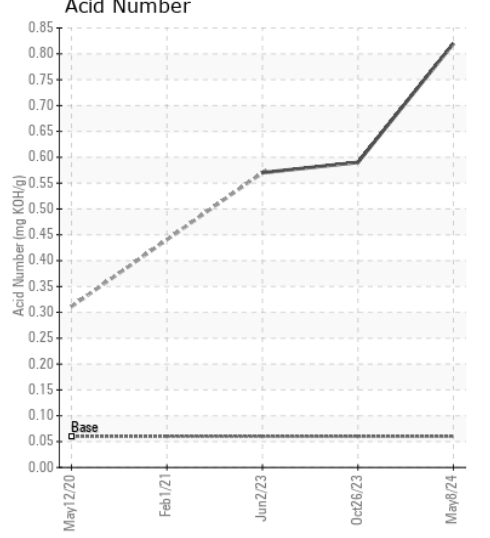
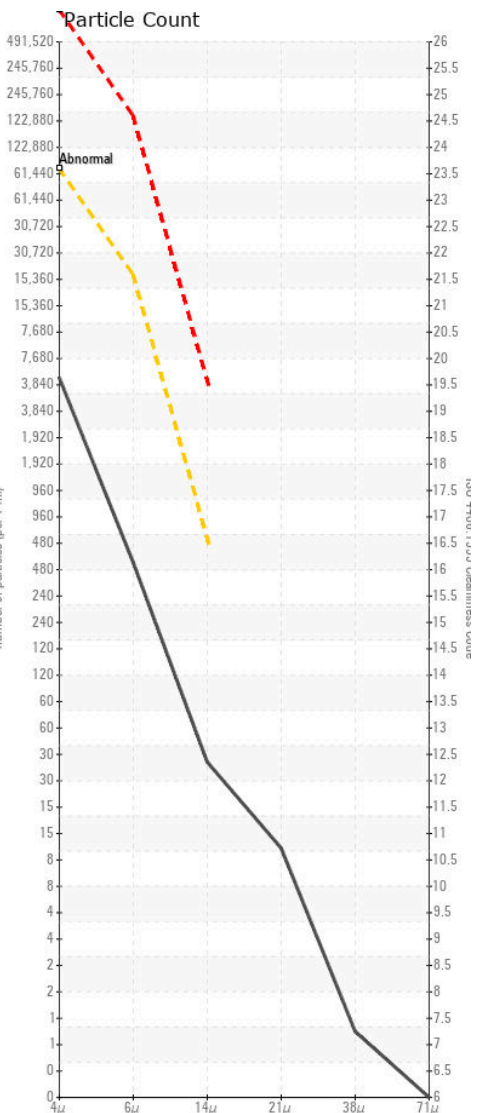
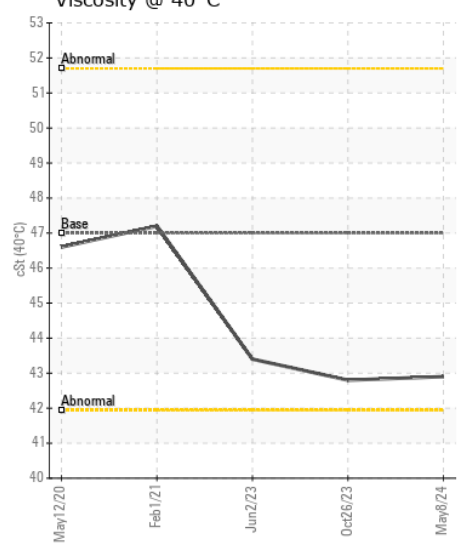
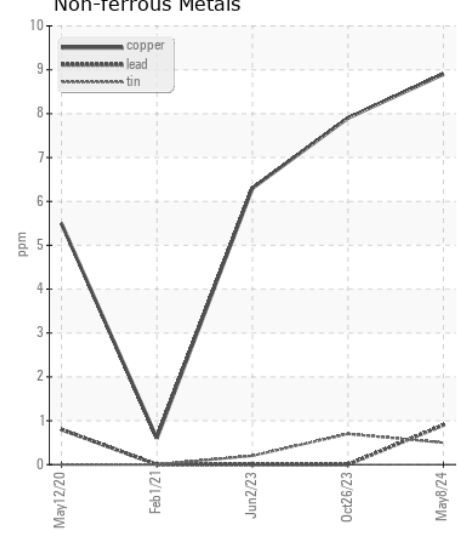
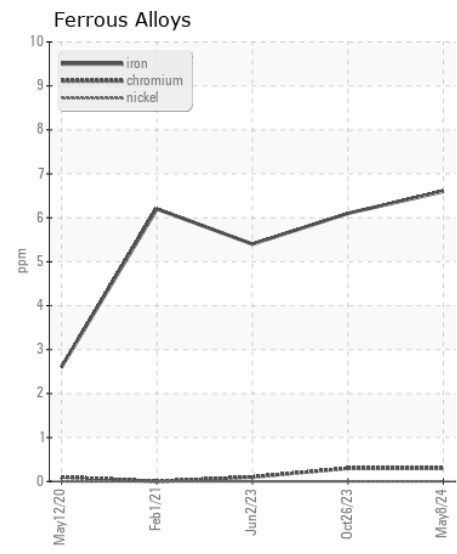
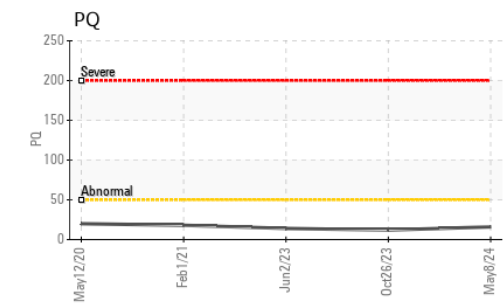
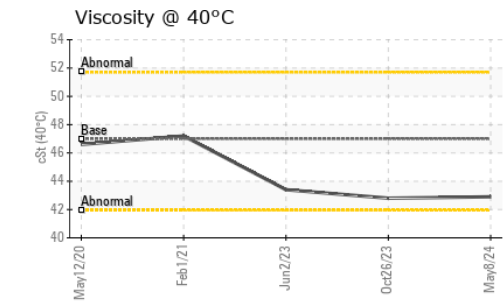
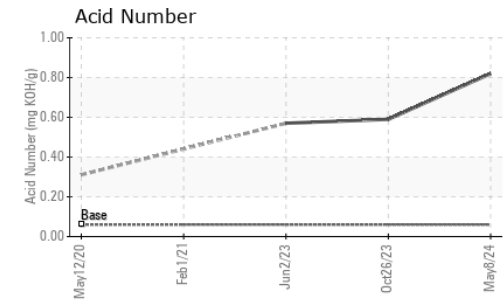
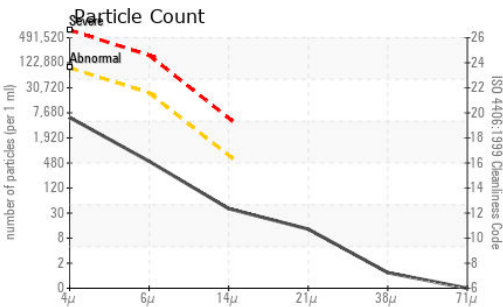
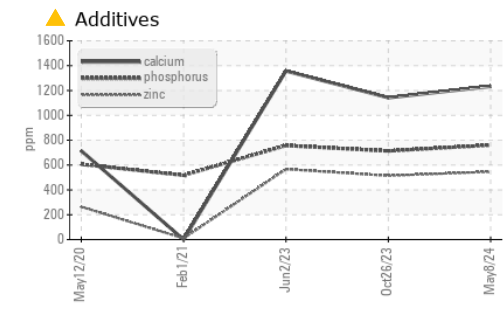
PQ		ASTM D8184	>50	16	12	14
Iron	ppm	ASTM D5185m	>32	7	6	5
Chromium	ppm	ASTM D5185m	>9	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>9	2	<1	2
Lead	ppm	ASTM D5185m	>28	<1	0	0
Copper	ppm	ASTM D5185m	>50	9	8	6
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Silicon	ppm	ASTM D5185m	>11	5	4	4
Potassium	ppm	ASTM D5185m	>20	3	1	<1
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	5193	---	13469
Particles >6µm		ASTM D7647	>20000	462	---	2697
Particles >14µm		ASTM D7647	>640	34	---	253
Particles >21µm		ASTM D7647	>160	11	---	60
Particles >38µm		ASTM D7647	>40	1	---	5
Particles >71µm		ASTM D7647	>10	0	---	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	20/16/12	---	21/19/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ HEAVY	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

Sodium	ppm	ASTM D5185m	>21	<1	4	2
Boron	ppm	ASTM D5185m		27	26	28
Barium	ppm	ASTM D5185m		0	20	2
Molybdenum	ppm	ASTM D5185m		<1	1	1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		12	10	18
Calcium	ppm	ASTM D5185m		1233	1142	1357
Phosphorus	ppm	ASTM D5185m	827	760	713	757
Zinc	ppm	ASTM D5185m	0	▲ 546	▲ 514	▲ 567
Sulfur	ppm	ASTM D5185m	13	1386	1646	1546
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.82	0.59	0.57
Visc @ 40°C	cSt	ASTM D445	47	42.9	42.8	43.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0215001 **Received** : 10 May 2024
Lab Number : 06175353 **Tested** : 13 May 2024
Unique Number : 11021406 **Diagnosed** : 13 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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