



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area

[05W47032]

Machine Id

JOHN DEERE 1FF245GXVJF801010

Component

Hydraulic System

Fluid

HITACHI HYDRAULIC SUPER EX 46HN (160 QTS)

RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218087	JR0195891	JR0176077
Sample Date		Client Info		30 May 2024	13 Feb 2024	13 Jul 2023
Machine Age	hrs	Client Info		6415	5915	5404
Oil Age	hrs	Client Info		1500	2583	500
Filter Age	hrs	Client Info		500	0	500
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Changed	Not Chngd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184	>50	16	11	9
Iron	ppm	ASTM D5185m	>32	4	3	5
Chromium	ppm	ASTM D5185m	>9	0	<1	<1
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	<1	1	0
Lead	ppm	ASTM D5185m	>28	0	0	0
Copper	ppm	ASTM D5185m	>50	3	2	3
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

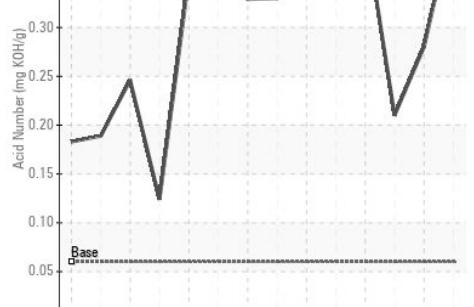
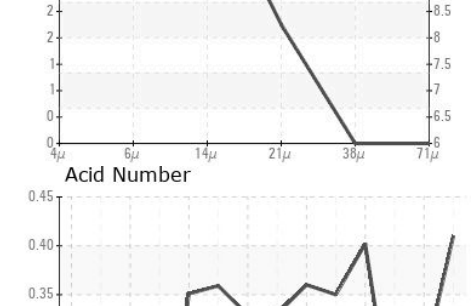
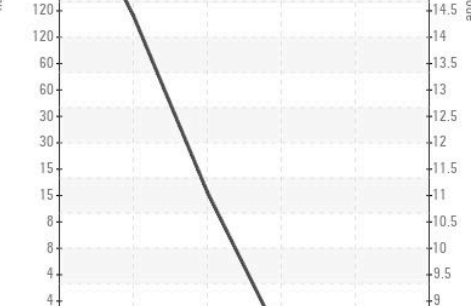
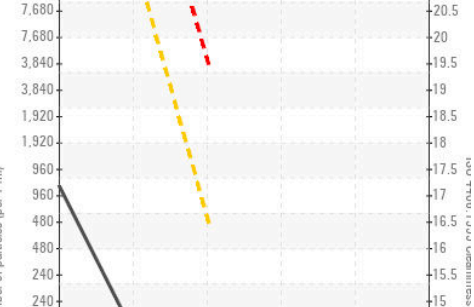
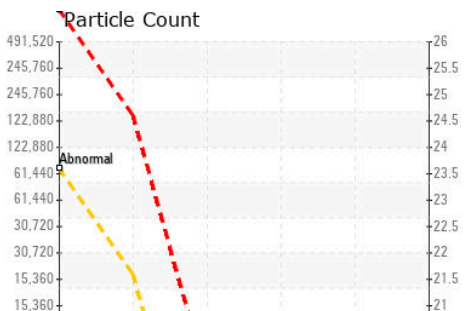
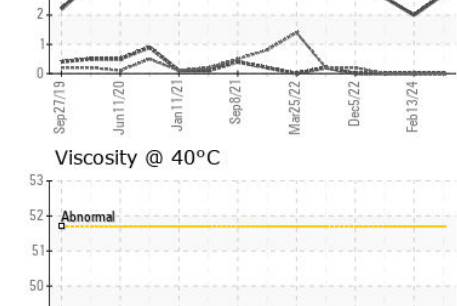
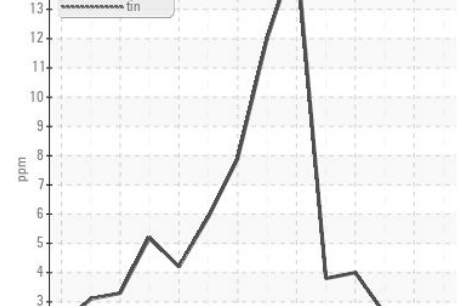
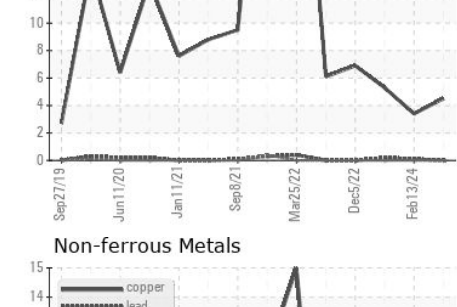
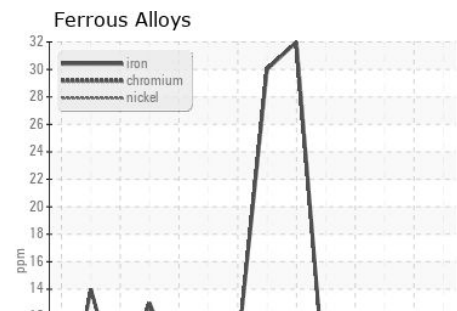
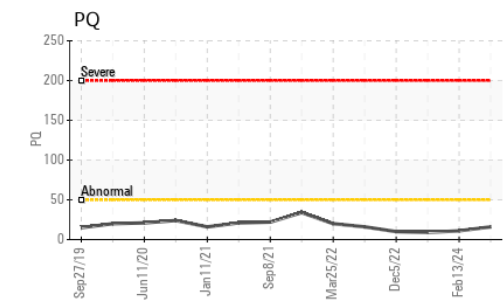
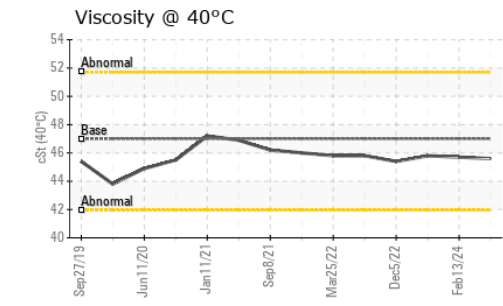
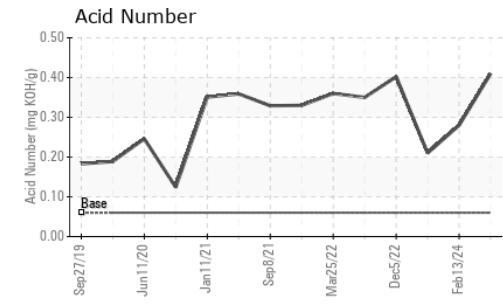
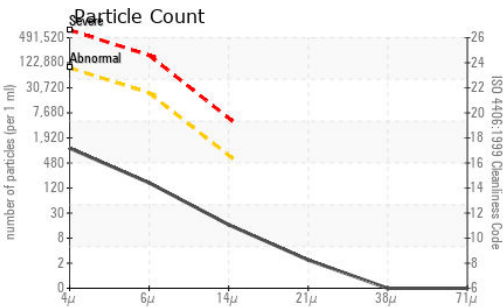
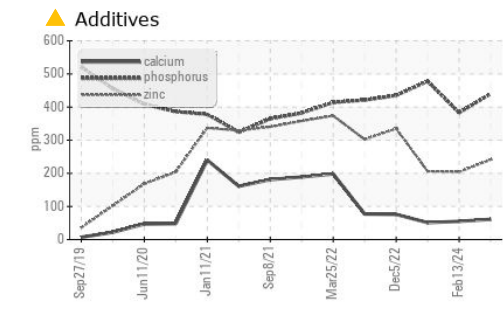
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	3	3	4
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	955	53073	8947
Particles >6µm		ASTM D7647	>20000	141	19680	741
Particles >14µm		ASTM D7647	>640	14	▲ 2683	27
Particles >21µm		ASTM D7647	>160	2	▲ 901	6
Particles >38µm		ASTM D7647	>40	0	32	0
Particles >71µm		ASTM D7647	>10	0	1	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	17/14/11	▲ 23/21/19	20/17/12
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	0	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		1	1	2
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		4	7	6
Calcium	ppm	ASTM D5185m		61	55	51
Phosphorus	ppm	ASTM D5185m	827	440	383	478
Zinc	ppm	ASTM D5185m	0	▲ 241	▲ 204	▲ 206
Sulfur	ppm	ASTM D5185m	13	601	462	555
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.41	0.28	0.21
Visc @ 40°C	cSt	ASTM D445	47	45.6	45.7	45.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218087 **Received** : 31 May 2024
Lab Number : 06196583 **Tested** : 03 Jun 2024
Unique Number : 11058706 **Diagnosed** : 03 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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 Contact: EDDIE GARRETSON
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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)