



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area

[47621]

Machine Id

JOHN DEERE 1FF085GKTKJ021130

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218665	JR0111478	JR0091696
Sample Date		Client Info		21 Jun 2024	15 Nov 2021	19 May 2021
Machine Age	hrs	Client Info		4395	2272	1650
Oil Age	hrs	Client Info		4395	0	0
Filter Age	hrs	Client Info		0	0	0
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.

PQ		ASTM D8184	>50	20	22	14
Iron	ppm	ASTM D5185m	>32	3	4	5
Chromium	ppm	ASTM D5185m	>9	0	0	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>9	<1	1	2
Lead	ppm	ASTM D5185m	>28	0	0	<1
Copper	ppm	ASTM D5185m	>50	3	5	5
Tin	ppm	ASTM D5185m	>5	<1	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

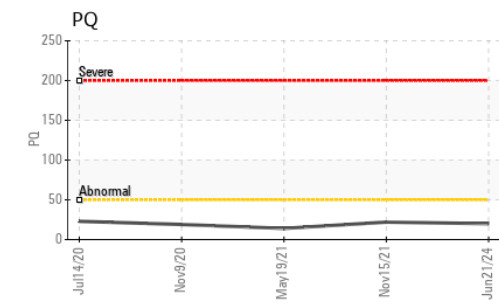
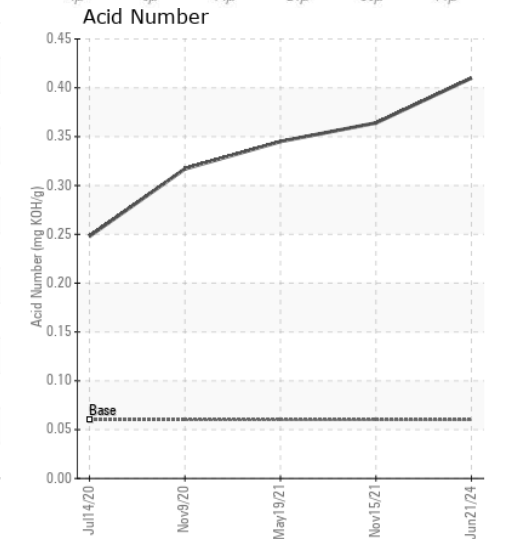
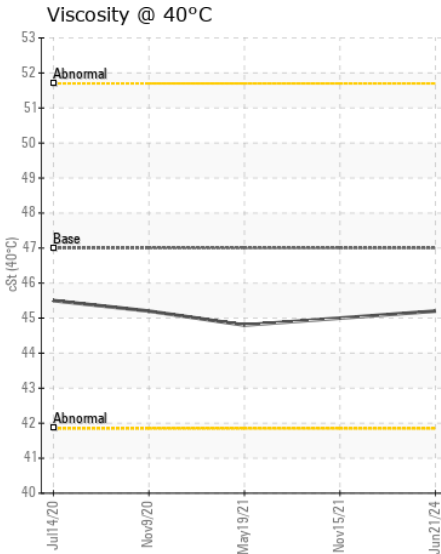
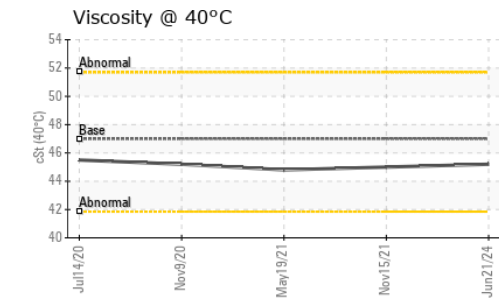
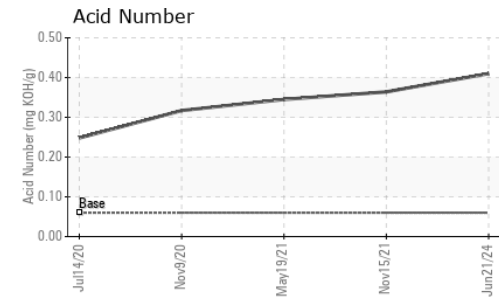
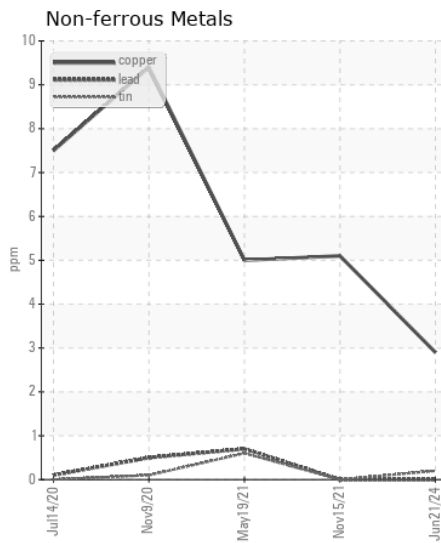
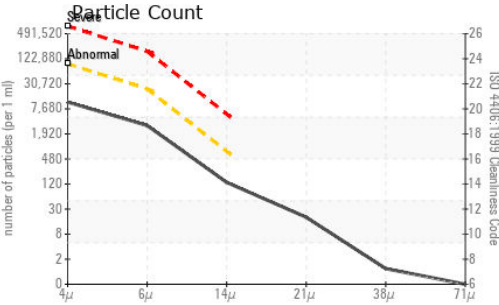
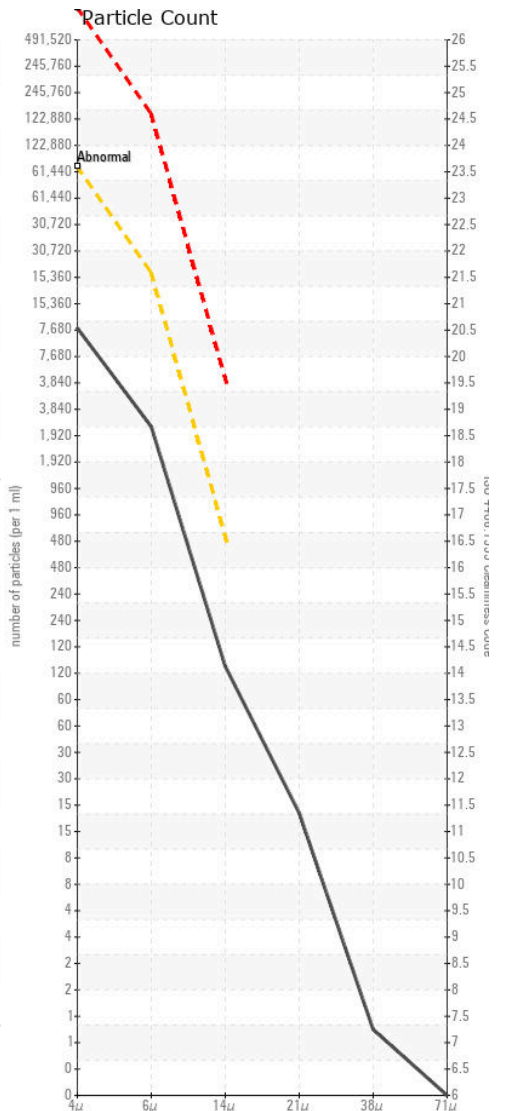
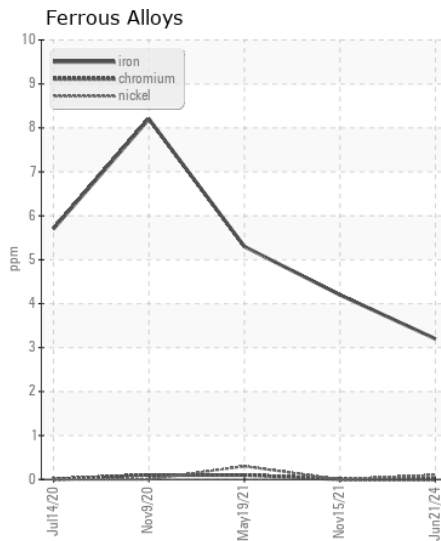
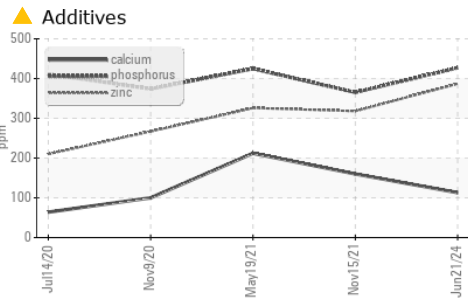
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	2	4	4
Potassium	ppm	ASTM D5185m	>20	2	<1	1
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	9702	17855	28721
Particles >6µm		ASTM D7647	>20000	2669	926	2025
Particles >14µm		ASTM D7647	>640	116	45	61
Particles >21µm		ASTM D7647	>160	17	7	14
Particles >38µm		ASTM D7647	>40	1	0	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	20/19/14	21/17/13	22/18/13
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	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>21	2	<1	<1
Boron	ppm	ASTM D5185m		2	2	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	2	2
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		12	10	15
Calcium	ppm	ASTM D5185m		113	160	212
Phosphorus	ppm	ASTM D5185m	827	427	365	425
Zinc	ppm	ASTM D5185m	0	▲ 387	▲ 318	▲ 326
Sulfur	ppm	ASTM D5185m	13	966	714	831
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.41	0.364	0.345
Visc @ 40°C	cSt	ASTM D445	47	45.2	45.0	44.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218665 **Received** : 24 Jun 2024
Lab Number : 06218087 **Tested** : 25 Jun 2024
Unique Number : 11096284 **Diagnosed** : 25 Jun 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: PQ)

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 F: (703)335-8095

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)