



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[W68059]

Machine Id
JOHN DEERE 470 P 1FF470PAJNF000028

Component
Hydraulic System

Fluid
HITACHI HYDRAULIC SUPER EX 46HN (30 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: W68059)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0219726	JR0205425	JR0192623
Sample Date		Client Info		20 Jun 2024	22 Mar 2024	15 Nov 2023
Machine Age	hrs	Client Info		2539	2048	1582
Oil Age	hrs	Client Info		2539	2048	1582
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184	>50	19	12	10
Iron	ppm	ASTM D5185m	>32	0	1	<1
Chromium	ppm	ASTM D5185m	>9	0	0	0
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	0	<1
Lead	ppm	ASTM D5185m	>28	0	0	0
Copper	ppm	ASTM D5185m	>50	<1	1	0
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	▲ LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

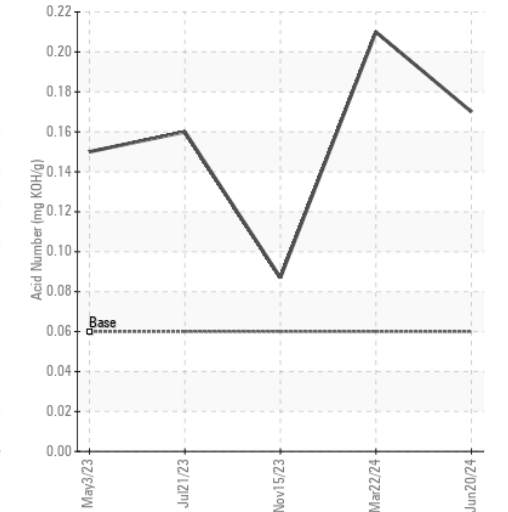
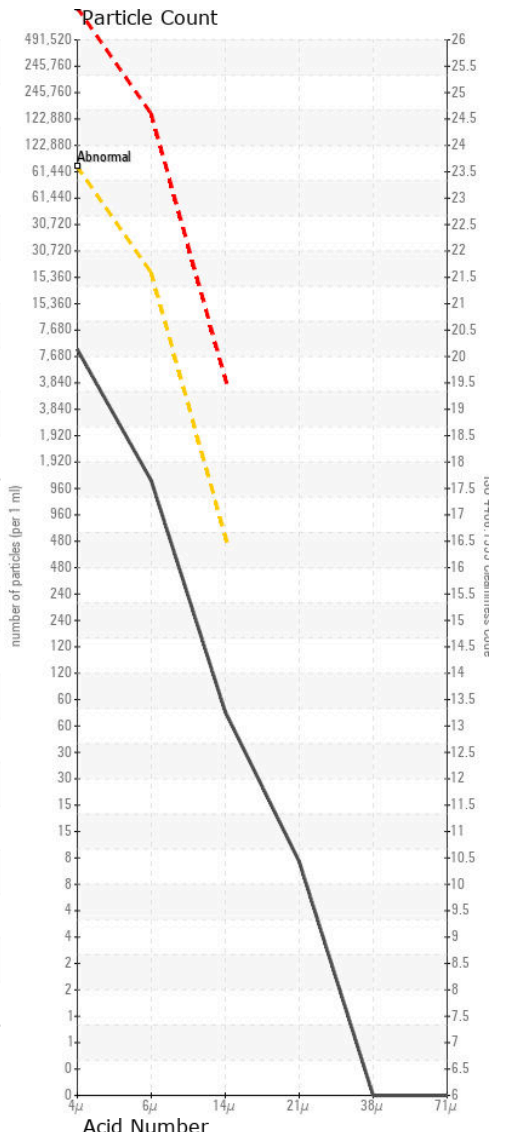
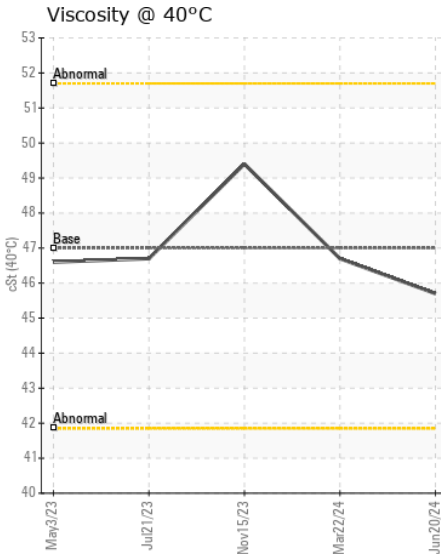
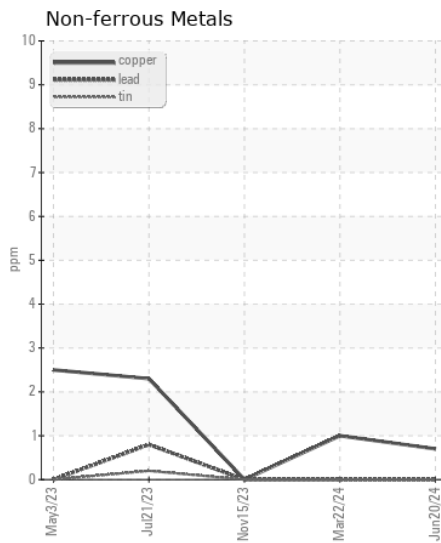
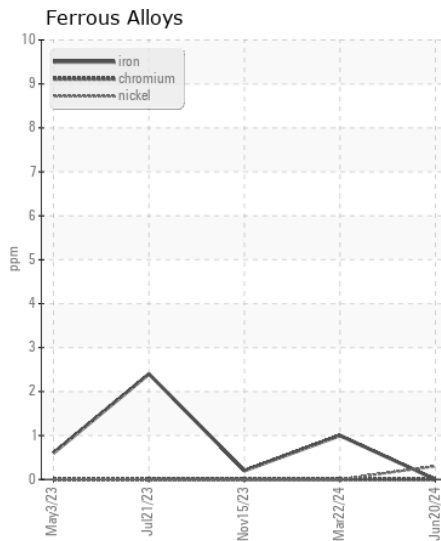
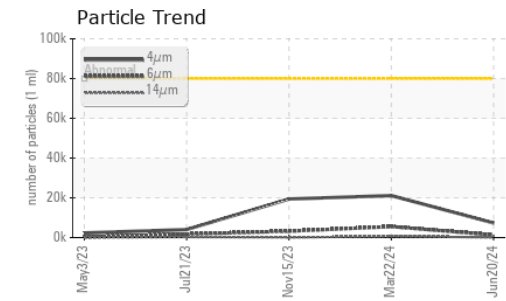
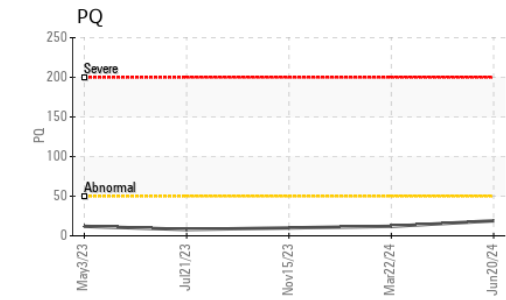
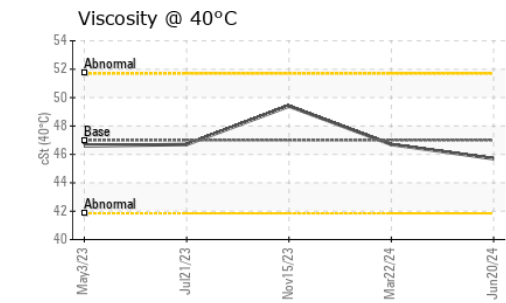
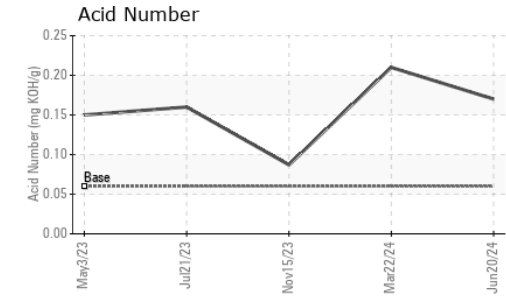
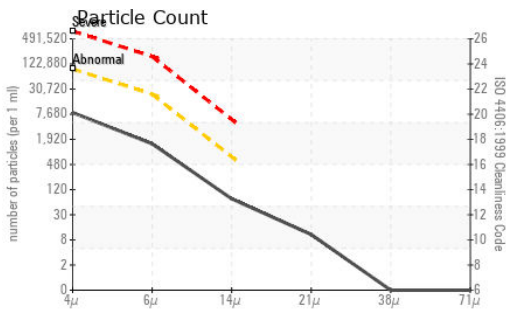
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>11	<1	<1	3
Potassium	ppm	ASTM D5185m	>20	2	0	<1
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	7335	21126	19394
Particles >6µm		ASTM D7647	>20000	1316	5549	3212
Particles >14µm		ASTM D7647	>640	64	624	63
Particles >21µm		ASTM D7647	>160	9	187	8
Particles >38µm		ASTM D7647	>40	0	6	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	20/18/13	22/20/16	21/19/13
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

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185m	>21	2	0	0
Boron	ppm	ASTM D5185m		0	0	4
Barium	ppm	ASTM D5185m		0	0	6
Molybdenum	ppm	ASTM D5185m		0	0	5
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		0	0	17
Calcium	ppm	ASTM D5185m		<1	10	39
Phosphorus	ppm	ASTM D5185m	827	514	513	580
Zinc	ppm	ASTM D5185m	0	5	14	22
Sulfur	ppm	ASTM D5185m	13	143	115	21
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.17	0.21	0.087
Visc @ 40°C	cSt	ASTM D445	47	45.7	46.7	49.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0219726 **Received** : 24 Jun 2024
Lab Number : 06218066 **Tested** : 25 Jun 2024
Unique Number : 11096263 **Diagnosed** : 25 Jun 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: PQ)

CARLTON'S BACKHOE
 9550 STATESVILLE ROAD
 CHARLOTTE, NC
 US 28269
 Contact: LEO

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)

T: (704)547-0211

F: