



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 470 P 1FF470PAPPF000353
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (40 GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample. (Customer Sample Comment: W68226)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0220075	JR0206397	JR0188525
Sample Date		Client Info		08 Jul 2024	08 Apr 2024	11 Dec 2023
Machine Age	hrs	Client Info		1553	1015	560
Oil Age	hrs	Client Info		1553	560	560
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Moderate concentration of visible metal present. All component wear rates are normal.

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184	>50	17	10	14
Iron	ppm	ASTM D5185m	>32	3	<1	0
Chromium	ppm	ASTM D5185m	>9	0	0	0
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	0	0	0
Lead	ppm	ASTM D5185m	>28	0	0	<1
Copper	ppm	ASTM D5185m	>50	2	1	3
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	MODER	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

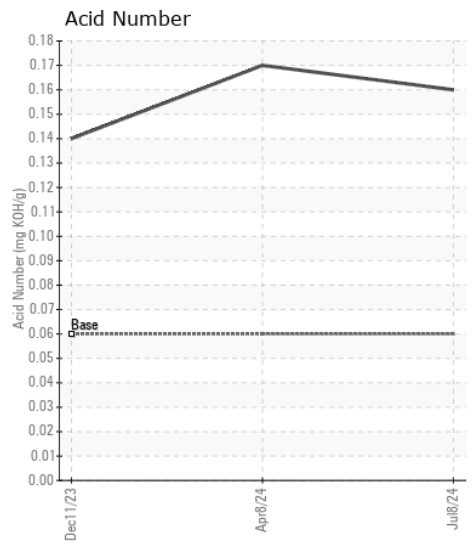
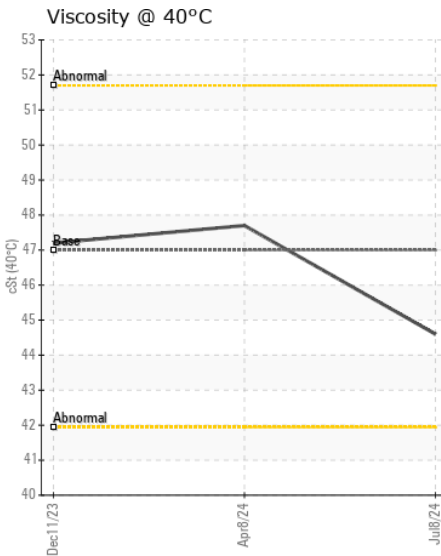
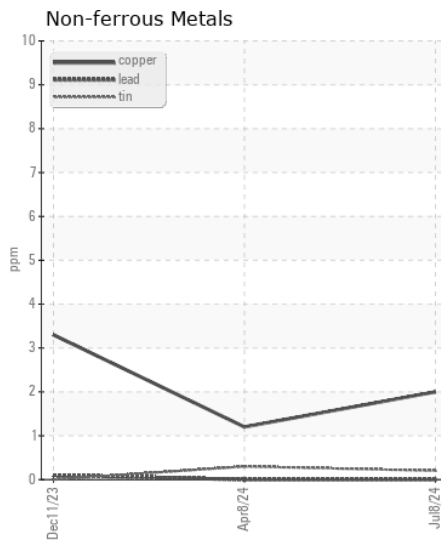
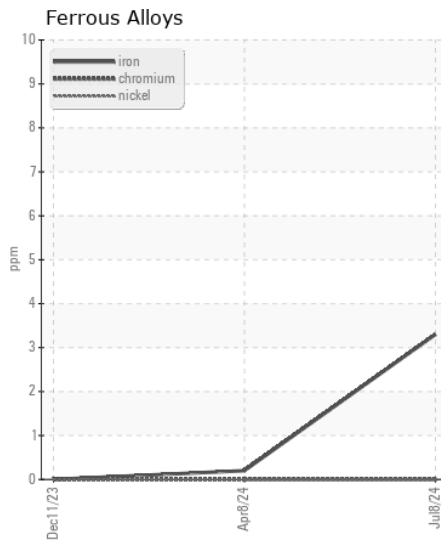
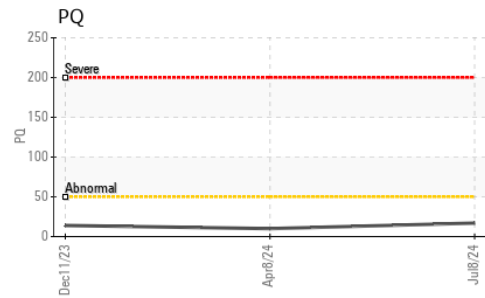
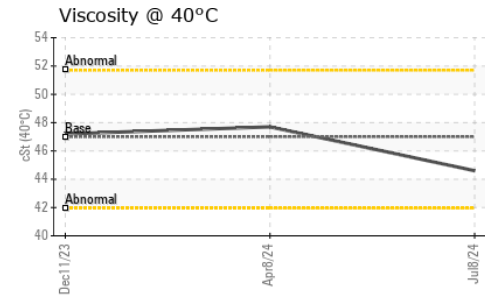
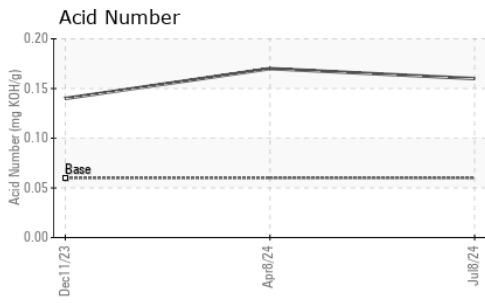
No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>11	<1	<1	<1
Potassium	ppm	ASTM D5185m	>20	2	0	2
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	---	4895	10872
Particles >6µm		ASTM D7647	>20000	---	2139	1011
Particles >14µm		ASTM D7647	>640	---	467	21
Particles >21µm		ASTM D7647	>160	---	150	3
Particles >38µm		ASTM D7647	>40	---	3	0
Particles >71µm		ASTM D7647	>10	---	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	---	19/18/16	21/17/12
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>21	1	0	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		5	0	<1
Calcium	ppm	ASTM D5185m		12	4	0
Phosphorus	ppm	ASTM D5185m	827	573	523	513
Zinc	ppm	ASTM D5185m	0	28	27	22
Sulfur	ppm	ASTM D5185m	13	218	113	128
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.16	0.17	0.14
Visc @ 40°C	cSt	ASTM D445	47	44.6	47.7	47.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0220075 **Received** : 10 Jul 2024
Lab Number : 06232184 **Tested** : 11 Jul 2024
Unique Number : 11115677 **Diagnosed** : 11 Jul 2024 - Don Baldrige
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: