



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[W8542]

Machine Id

JOHN DEERE 470G 1FF470GXEMF236612

Component

Hydraulic System

Fluid

HITACHI HYDRAULIC SUPER EX 46HN (82 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: W8542)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0197010	JR0173927	JR0127395
Sample Date		Client Info		22 Feb 2024	29 May 2023	07 Aug 2022
Machine Age	hrs	Client Info		3260	2803	2343
Oil Age	hrs	Client Info		1560	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	N/A	N/A
Filter Changed		Client Info		Not Chngd	N/A	N/A
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	12	12	13
Iron	ppm	ASTM D5185m	>32	3	4	3
Chromium	ppm	ASTM D5185m	>9	0	<1	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>9	0	1	<1
Lead	ppm	ASTM D5185m	>28	0	<1	<1
Copper	ppm	ASTM D5185m	>50	5	4	5
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

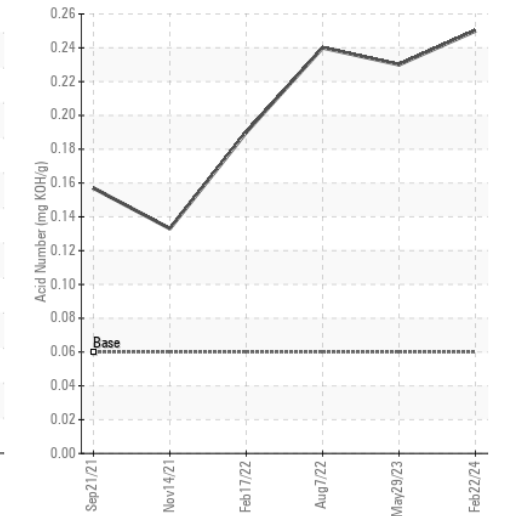
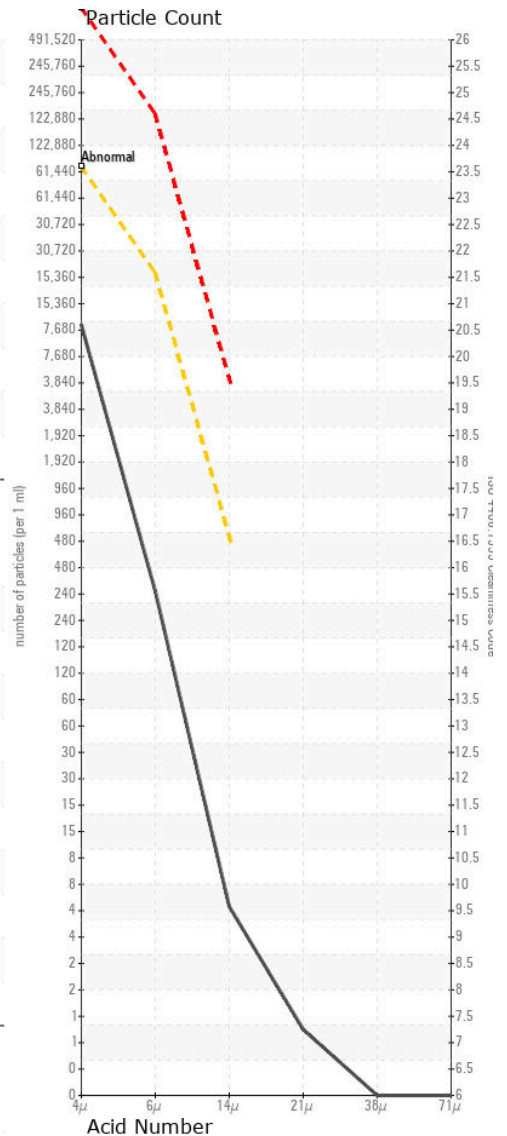
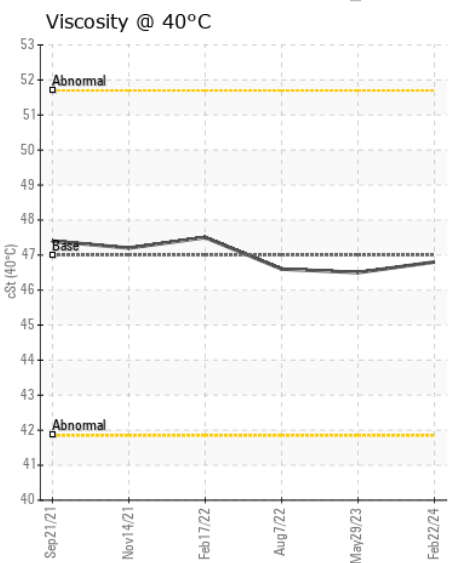
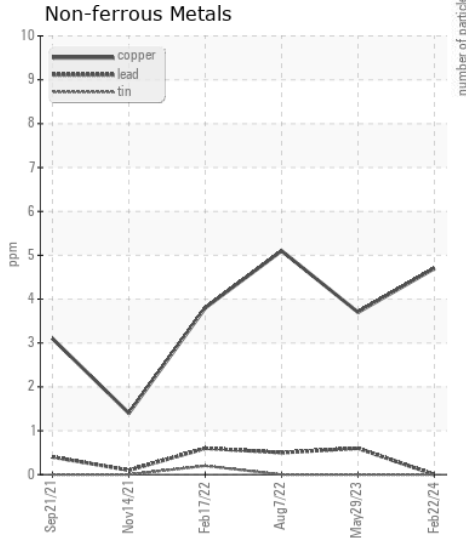
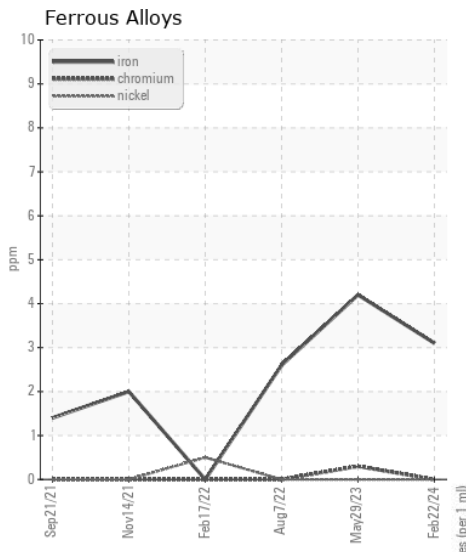
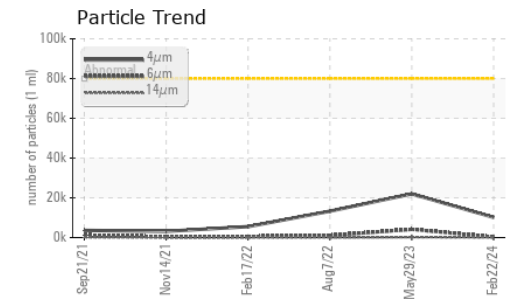
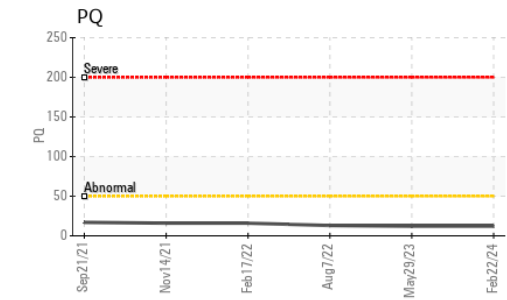
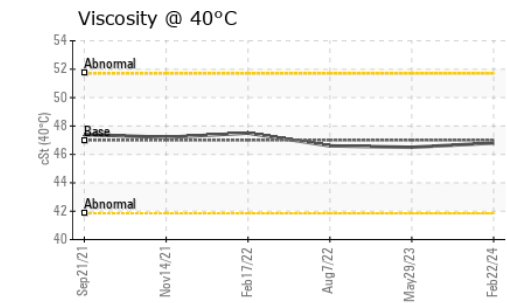
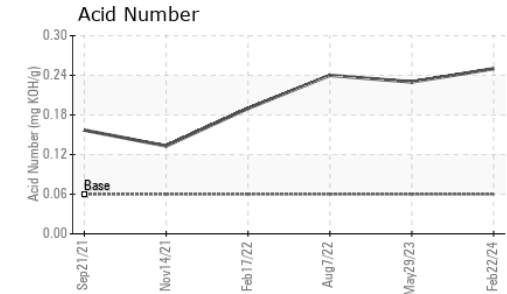
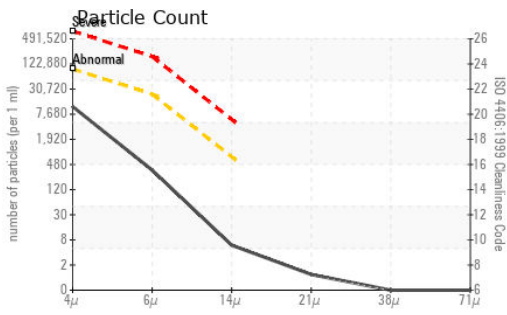
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	1	2	<1
Potassium	ppm	ASTM D5185m	>20	0	2	2
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	10160	22009	▲ 13276
Particles >6µm		ASTM D7647	>20000	310	4144	1134
Particles >14µm		ASTM D7647	>640	5	192	26
Particles >21µm		ASTM D7647	>160	1	44	5
Particles >38µm		ASTM D7647	>40	0	2	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	21/15/10	22/19/15	▲ 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 suitable for further service.

Sodium	ppm	ASTM D5185m	>21	2	1	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		0	10	3
Calcium	ppm	ASTM D5185m		5	10	22
Phosphorus	ppm	ASTM D5185m	827	454	498	484
Zinc	ppm	ASTM D5185m	0	74	▲ 117	91
Sulfur	ppm	ASTM D5185m	13	300	281	345
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.25	0.23	0.24
Visc @ 40°C	cSt	ASTM D445	47	46.8	46.5	46.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0197010

Lab Number : 06100056

Unique Number : 10898286

Test Package : MOBCE (Additional Tests: PQ)

Received : 26 Feb 2024

Tested : 27 Feb 2024

Diagnosed : 27 Feb 2024 - Don Baldrige

JRE - HOPE MILLS/FAYETTEVILLE

5039 HWY 301 SOUTH

HOPE MILLS, NC

US 28348

Contact: FAYETTEVILLE SHOP

stephen.mullis@jamesriverequipment.com; panastasio@wearcheck.com

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:

F: