



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[05W47452]

Machine Id

JOHN DEERE PM061215

Component

Hydraulic System

Fluid

HITACHI HYDRAULIC SUPER EX 46HN (220 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218259	JR0208326	JR0192472
Sample Date		Client Info		21 Jun 2024	18 Mar 2024	28 Nov 2023
Machine Age	hrs	Client Info		2537	2045	1509
Oil Age	hrs	Client Info		2537	2045	1509
Filter Age	hrs	Client Info		492	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	N/A
Filter Changed		Client Info		Not Chngd	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184	>50	18	17	13
Iron	ppm	ASTM D5185m	>32	0	4	4
Chromium	ppm	ASTM D5185m	>9	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	0	2
Lead	ppm	ASTM D5185m	>28	0	0	<1
Copper	ppm	ASTM D5185m	>50	<1	<1	2
Tin	ppm	ASTM D5185m	>5	0	<1	<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

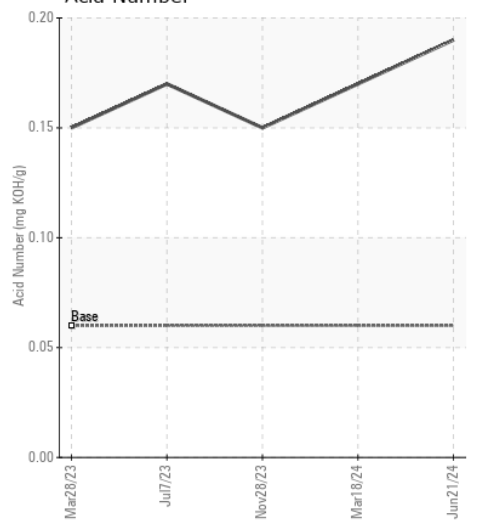
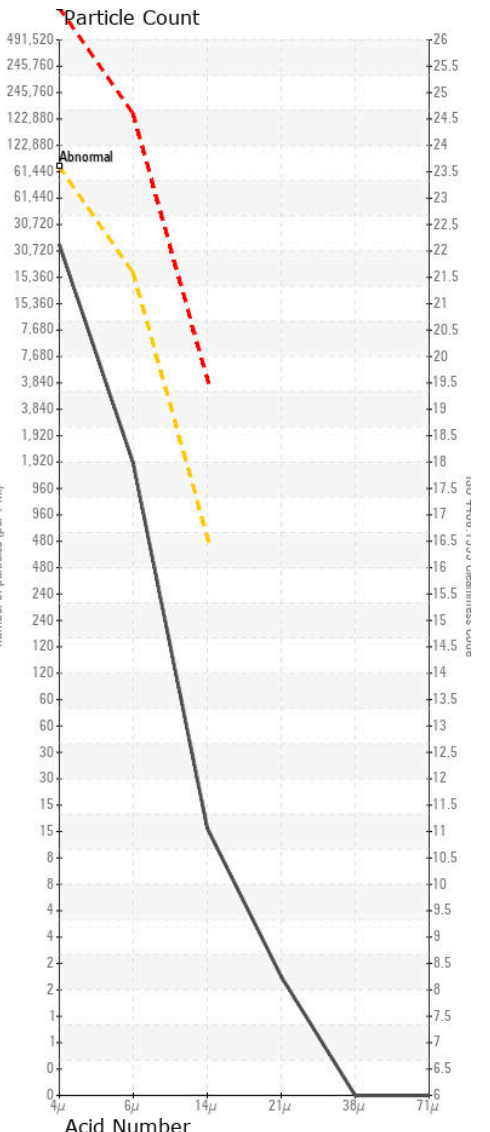
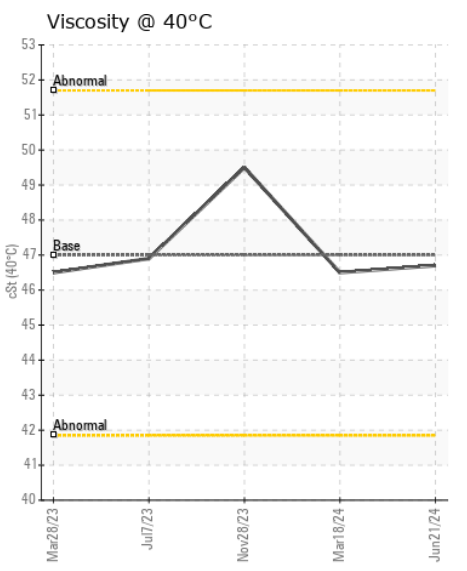
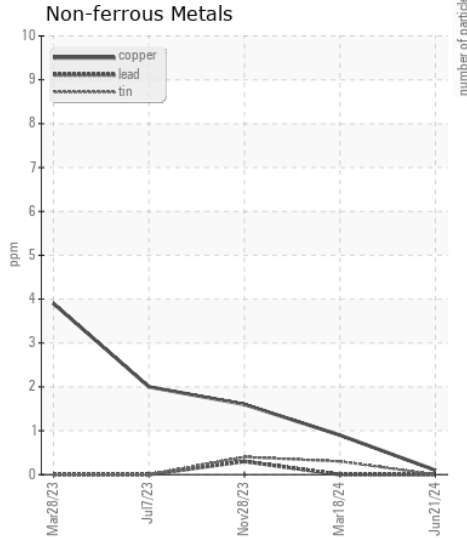
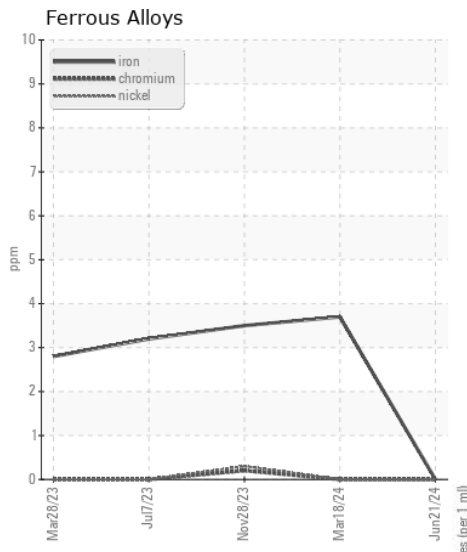
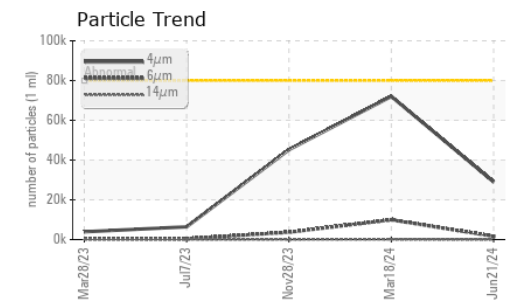
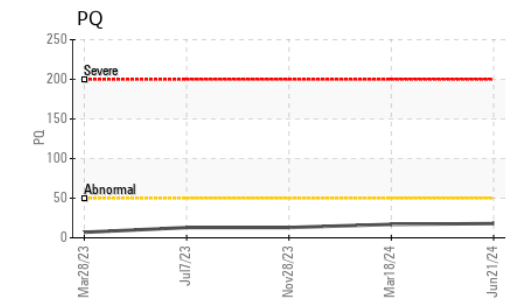
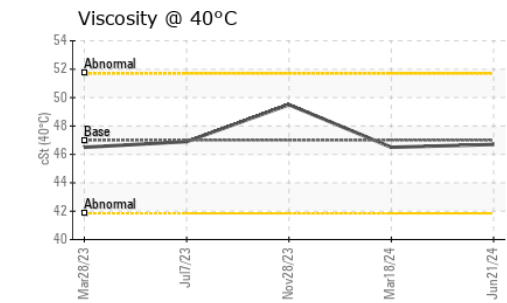
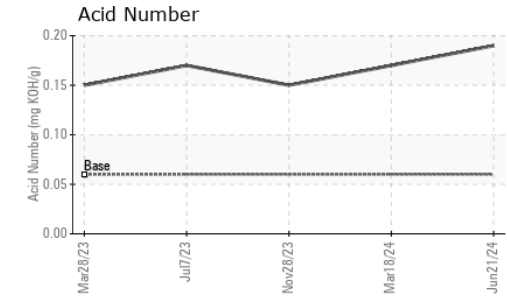
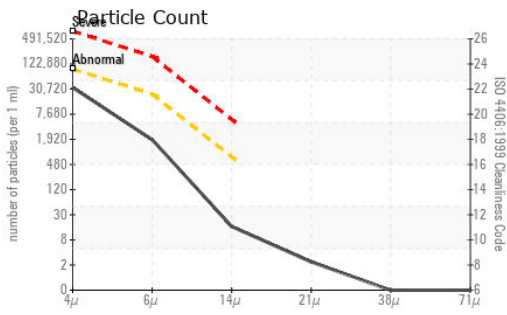
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>11	<1	1	<1
Potassium	ppm	ASTM D5185m	>20	0	0	1
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	29000	72029	45249
Particles >6µm		ASTM D7647	>20000	1653	9936	3672
Particles >14µm		ASTM D7647	>640	14	58	11
Particles >21µm		ASTM D7647	>160	2	12	2
Particles >38µm		ASTM D7647	>40	0	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	22/18/11	23/20/13	23/19/11
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	1	0	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	4
Molybdenum	ppm	ASTM D5185m		0	0	<1
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		0	0	<1
Calcium	ppm	ASTM D5185m		<1	4	8
Phosphorus	ppm	ASTM D5185m	827	524	520	550
Zinc	ppm	ASTM D5185m	0	0	11	5
Sulfur	ppm	ASTM D5185m	13	86	106	22
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.19	0.17	0.15
Visc @ 40°C	cSt	ASTM D445	47	46.7	46.5	49.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218259 **Received** : 25 Jun 2024
Lab Number : 06219580 **Tested** : 26 Jun 2024
Unique Number : 11097777 **Diagnosed** : 26 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

FITZGERALD EXCAVATING
 PO BOX 2168
 WINCHESTER, VA
 US 22604
 Contact: Service Manager

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)

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F: