



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[45552]

Machine Id

JOHN DEERE PM061215

Component

Hydraulic System

Fluid

HITACHI HYDRAULIC SUPER EX 46HN (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0208326	JR0192472	JR0176096
Sample Date		Client Info		18 Mar 2024	28 Nov 2023	07 Jul 2023
Machine Age	hrs	Client Info		2045	1509	941
Oil Age	hrs	Client Info		2045	1509	941
Filter Age	hrs	Client Info		0	0	941
Oil Changed		Client Info		Not Changed	N/A	Not Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184	>50	17	13	13
Iron	ppm	ASTM D5185m	>32	4	4	3
Chromium	ppm	ASTM D5185m	>9	0	<1	0
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	2	1
Lead	ppm	ASTM D5185m	>28	0	<1	0
Copper	ppm	ASTM D5185m	>50	<1	2	2
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

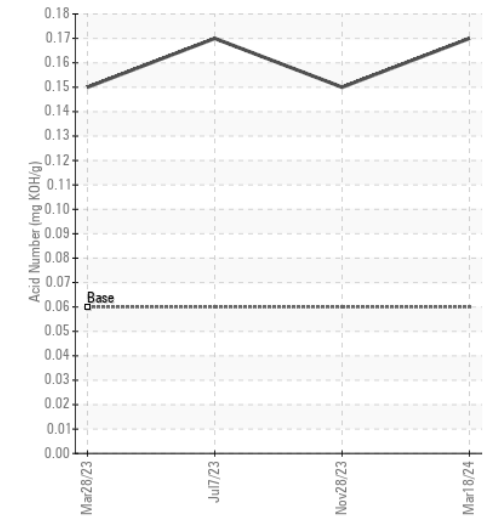
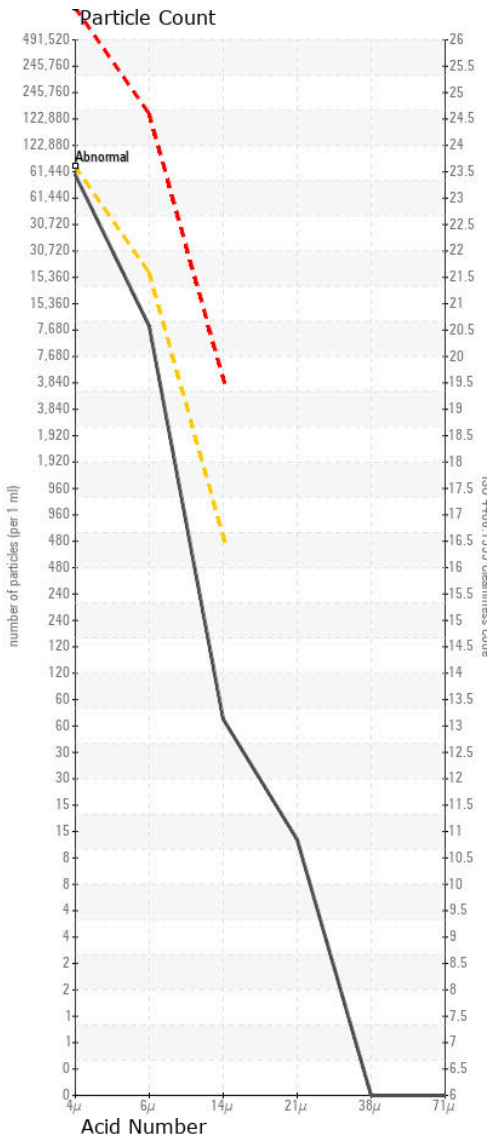
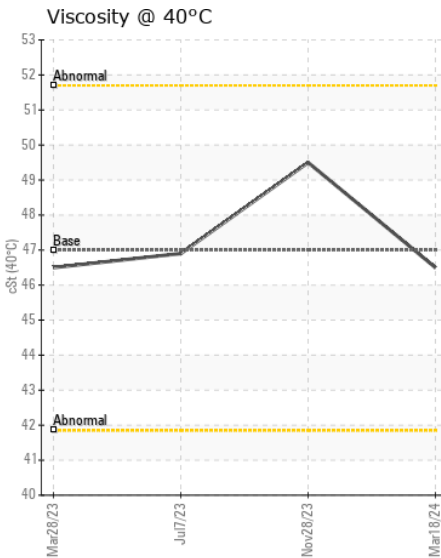
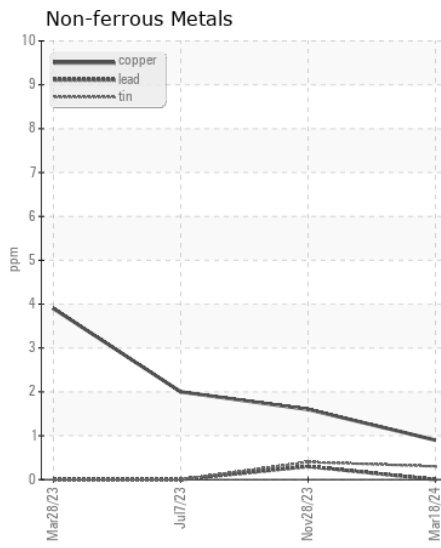
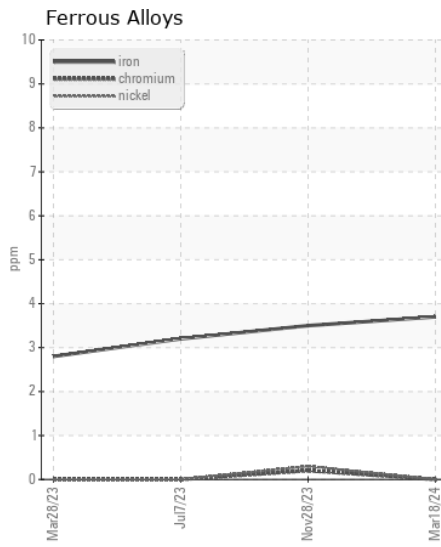
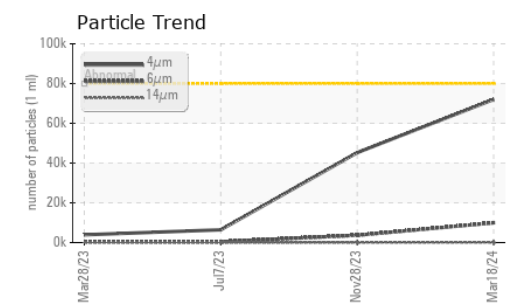
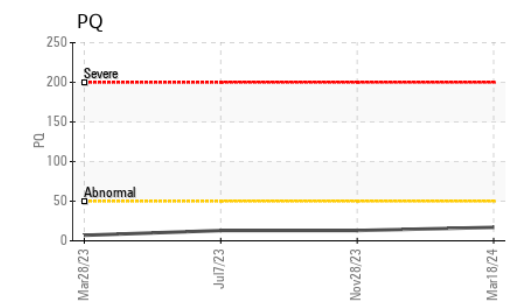
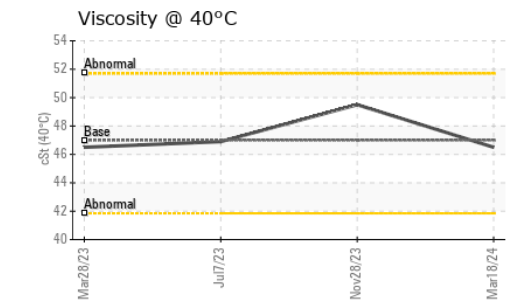
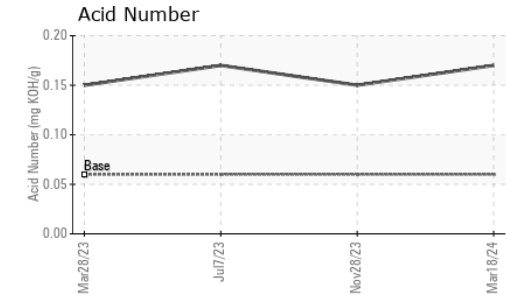
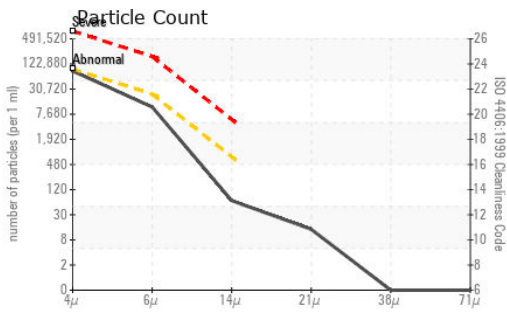
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185m	>11	1	<1	<1
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	72029	45249	6433
Particles >6µm		ASTM D7647	>20000	9936	3672	410
Particles >14µm		ASTM D7647	>640	58	11	10
Particles >21µm		ASTM D7647	>160	12	2	1
Particles >38µm		ASTM D7647	>40	0	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	23/20/13	23/19/11	20/16/10
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	0	0	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	4	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		0	<1	0
Calcium	ppm	ASTM D5185m		4	8	4
Phosphorus	ppm	ASTM D5185m	827	520	550	579
Zinc	ppm	ASTM D5185m	0	11	5	15
Sulfur	ppm	ASTM D5185m	13	106	22	117
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.17	0.15	0.17
Visc @ 40°C	cSt	ASTM D445	47	46.5	49.5	46.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0208326 **Received** : 20 Mar 2024
Lab Number : 06123560 **Tested** : 25 Mar 2024
Unique Number : 10937711 **Diagnosed** : 25 Mar 2024 - Jonathan Hester
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: