



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
[05W46990]

Machine Id
JOHN DEERE 000748

Component
Hydraulic System

Fluid
JOHN DEERE ZINC-FREE HYDRAULIC OIL 46 (55 GAL)

RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218007	JR0203128	JR0192432
Sample Date		Client Info		28 May 2024	23 Feb 2024	17 Nov 2023
Machine Age	hrs	Client Info		1983	1490	967
Oil Age	hrs	Client Info		1983	1490	967
Filter Age	hrs	Client Info		1000	523	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	4	1	2
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		1	0	0
Aluminum	ppm	ASTM D5185m	>10	1	0	0
Lead	ppm	ASTM D5185m	>10	<1	0	0
Copper	ppm	ASTM D5185m	>75	3	4	4
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

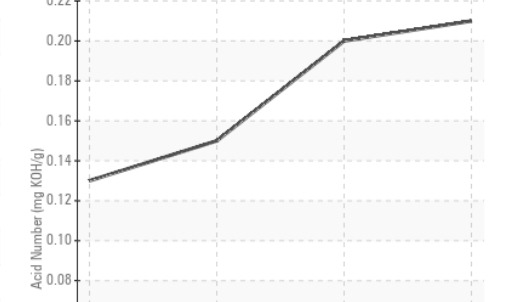
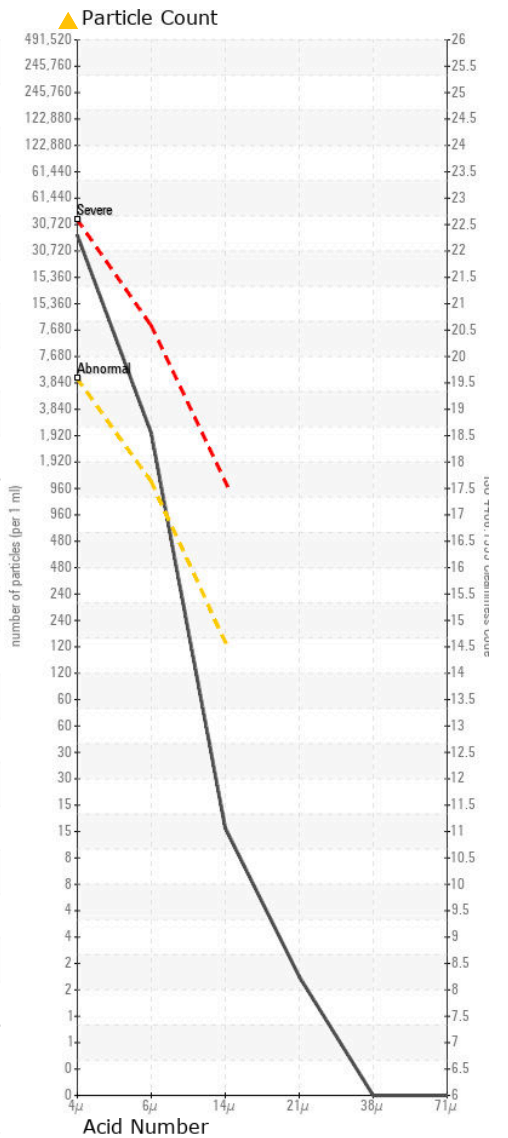
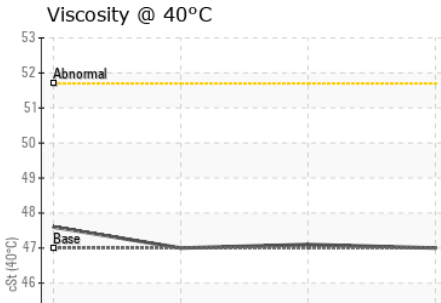
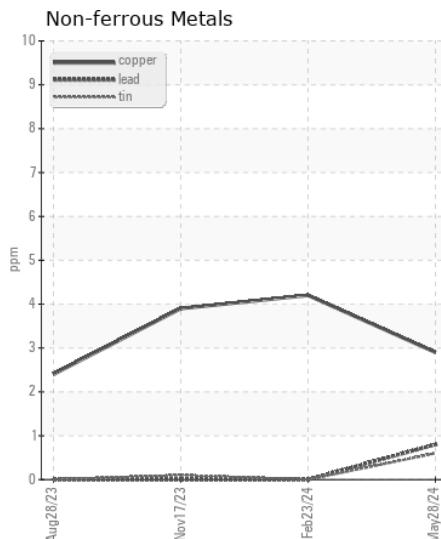
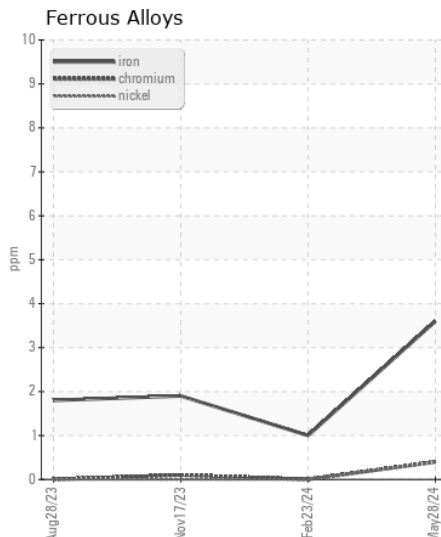
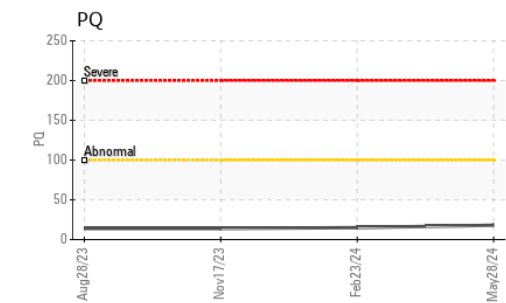
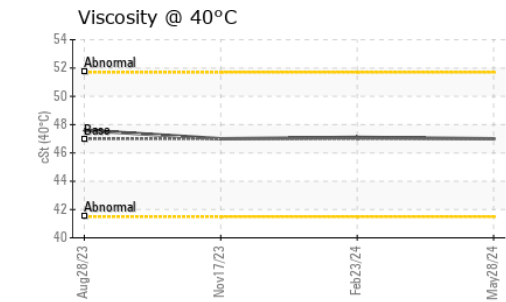
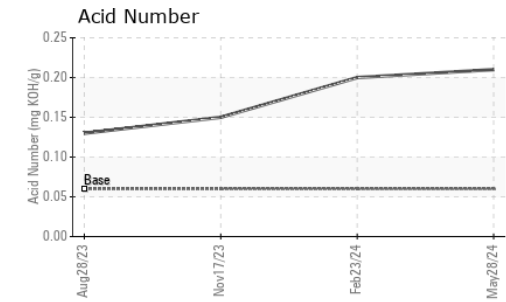
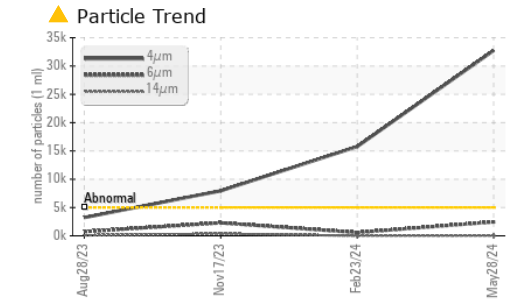
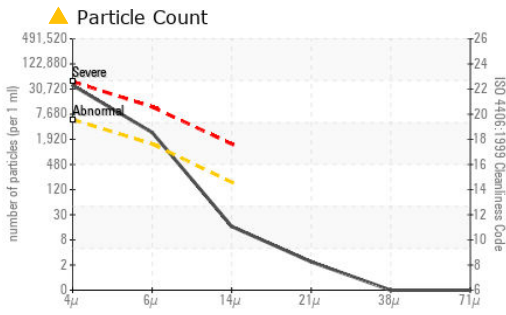
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	2	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 32743	▲ 15769	● 7952
Particles >6µm		ASTM D7647	>1300	● 2452	575	● 2294
Particles >14µm		ASTM D7647	>160	14	5	▲ 370
Particles >21µm		ASTM D7647	>40	2	2	▲ 94
Particles >38µm		ASTM D7647	>10	0	0	2
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 22/18/11	▲ 21/16/10	▲ 20/18/16
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	>0.1	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		0	2	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		<1	0	0
Calcium	ppm	ASTM D5185m		11	20	29
Phosphorus	ppm	ASTM D5185m		502	497	522
Zinc	ppm	ASTM D5185m		26	26	44
Sulfur	ppm	ASTM D5185m		63	110	79
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.21	0.20	0.15
Visc @ 40°C	cSt	ASTM D445	47	47.0	47.1	47.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218007 **Received** : 29 May 2024
Lab Number : 06194602 **Tested** : 31 May 2024
Unique Number : 11056725 **Diagnosed** : 31 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

B & S SITE DEVELOPMENT
 7800 PINEY BRANCH LANE
 BRISTOW, VA
 US 20136
 Contact: DANNY HUFF
 dhuff@bandssite.com
 T: (540)270-3203
 F: (703)753-0605

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)