



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 345 8002301 (S/N 010265)
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0158139	JR0138678	JR0122112
Sample Date		Client Info		09 Mar 2023	25 Jan 2023	25 May 2022
Machine Age	hrs	Client Info		1359	1450	1297
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ATTENTION

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		12	10	16
Iron	ppm	ASTM D5185m	>20	<1	8	4
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>10	1	<1	<1
Lead	ppm	ASTM D5185m	>10	0	<1	1
Copper	ppm	ASTM D5185m	>75	0	2	1
Tin	ppm	ASTM D5185m	>10	0	<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

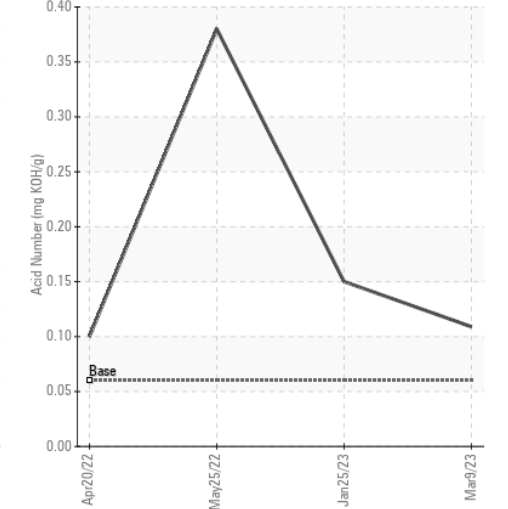
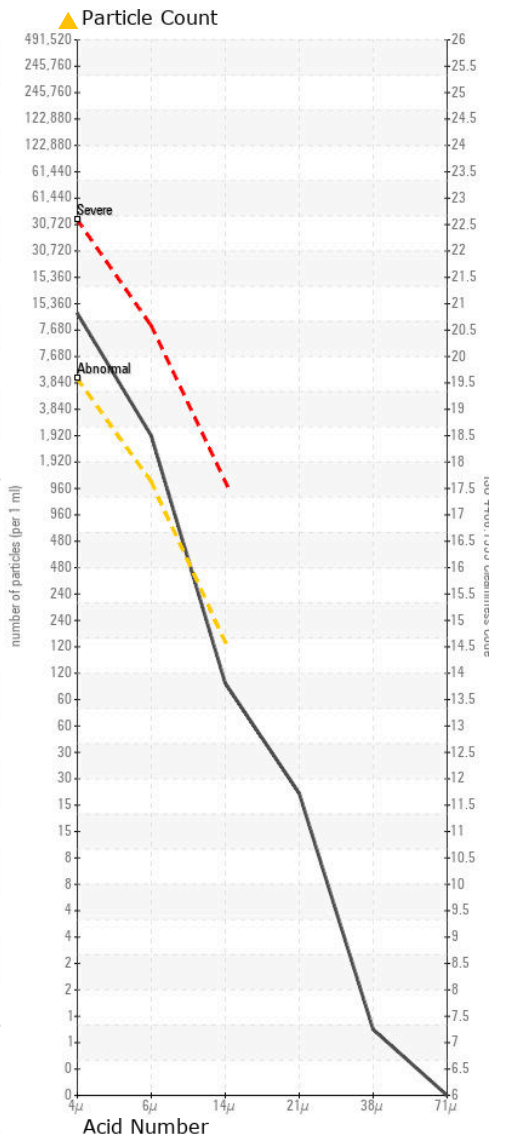
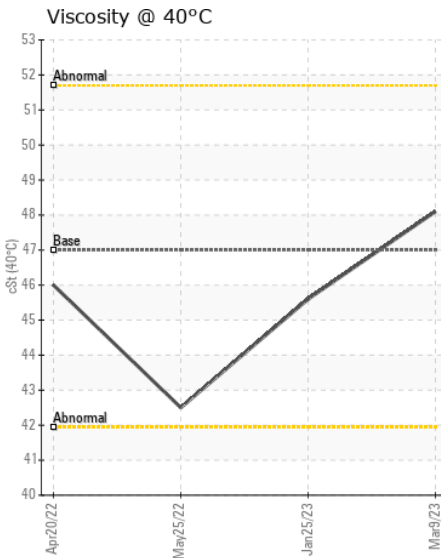
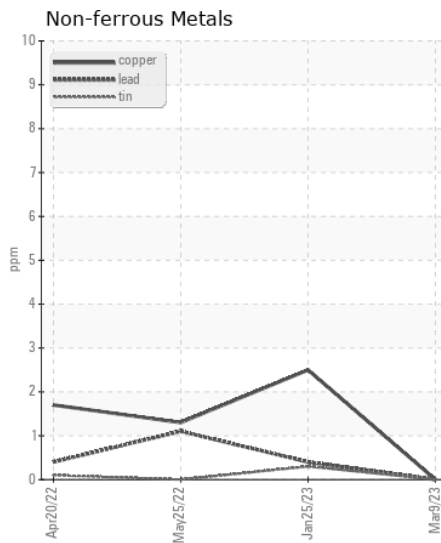
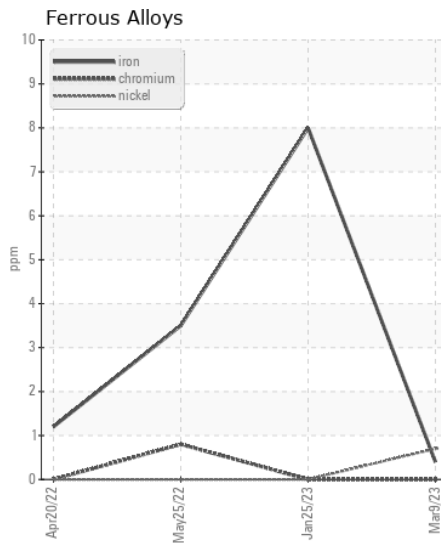
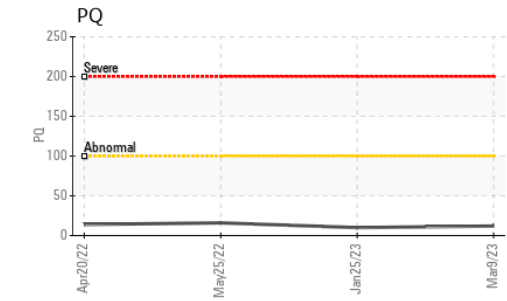
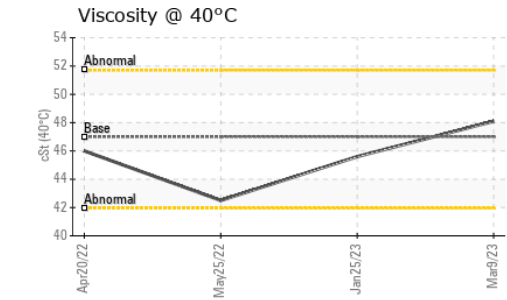
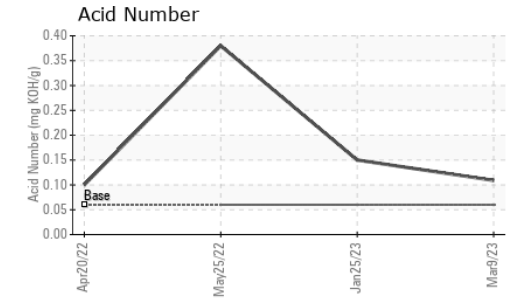
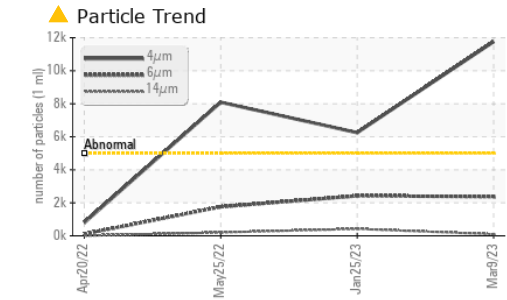
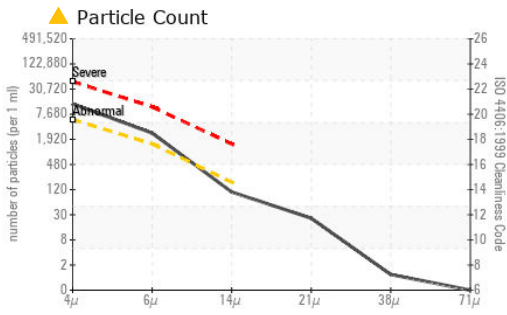
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	2	1	2
Potassium	ppm	ASTM D5185m	>20	<1	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 11762	▲ 6247	● 8089
Particles >6µm		ASTM D7647	>1300	● 2368	▲ 2420	● 1758
Particles >14µm		ASTM D7647	>160	93	▲ 421	● 202
Particles >21µm		ASTM D7647	>40	22	▲ 106	● 74
Particles >38µm		ASTM D7647	>10	1	8	4
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/18/14	▲ 20/18/16	● 20/18/15
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	VLITE	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 oils additive package is suitable for further service.

Sodium	ppm	ASTM D5185m		0	0	<1
Boron	ppm	ASTM D5185m		0	0	2
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		0	0	<1
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		0	<1	2
Calcium	ppm	ASTM D5185m		<1	0	67
Phosphorus	ppm	ASTM D5185m	827	611	508	339
Zinc	ppm	ASTM D5185m	0	2	48	415
Sulfur	ppm	ASTM D5185m	13	13	153	1652
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.109	0.15	0.38
Visc @ 40°C	cSt	ASTM D445	47	48.1	45.6	42.5



Certificate L2367

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

Sample No. : JR0158139

Lab Number : 05788477

Unique Number : 10373148

Test Package : CONST (Additional Tests: PQ)

Received : 10 Mar 2023

Tested : 13 Mar 2023

Diagnosed : 13 Mar 2023 - Don Baldrige

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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