



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
Store 2 - Beaver [RO#138140]
 Machine Id
JOHN DEERE 3754D 1FF3754DCC0370039
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (97 GAL)

RECOMMENDATION

Recommend drain oil if not already done. Reduce drain interval to 2000 hours or drain and flush and use recommended zinc free oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0038704	LEC0033322	LEC0020258
Sample Date		Client Info		02 Jun 2023	29 Jul 2022	09 Jul 2021
Machine Age	hrs	Client Info		10611	10003	9443
Oil Age	hrs	Client Info		608	1075	515
Filter Age	hrs	Client Info		608	1075	515
Oil Changed		Client Info		Not Chngd	Changed	Not Chngd
Filter Changed		Client Info		Not Chngd	Changed	Not Chngd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	12	20	20
Iron	ppm	ASTM D5185m	>32	8	18	3
Chromium	ppm	ASTM D5185m	>9	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	2	0
Lead	ppm	ASTM D5185m	>28	<1	1	<1
Copper	ppm	ASTM D5185m	>50	<1	1	<1
Tin	ppm	ASTM D5185m	>5	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

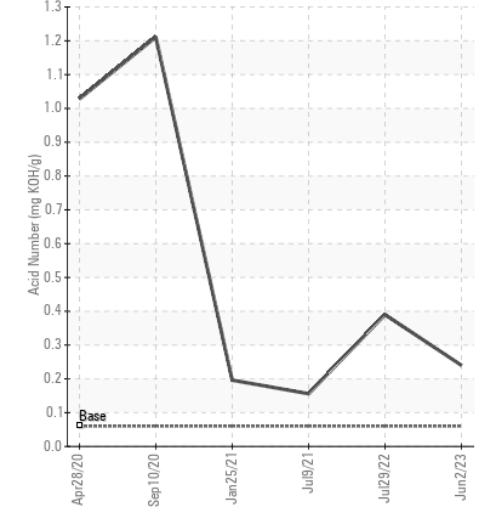
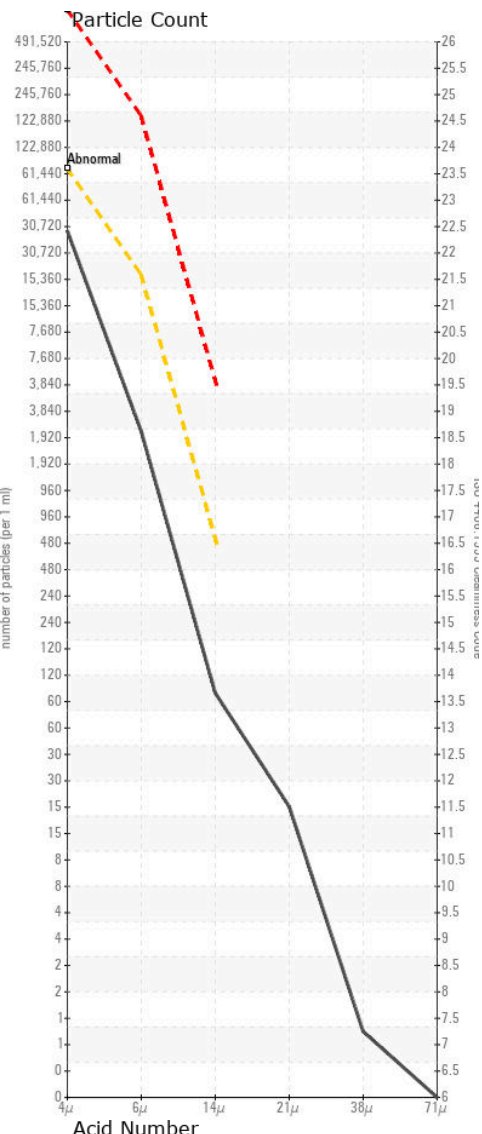
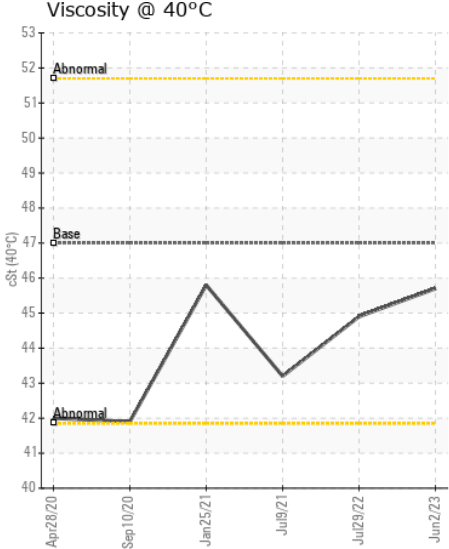
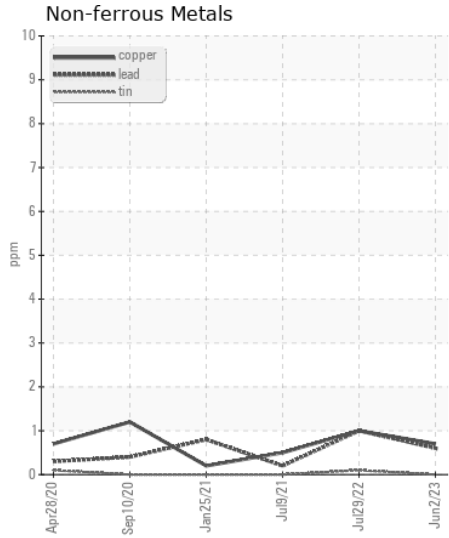
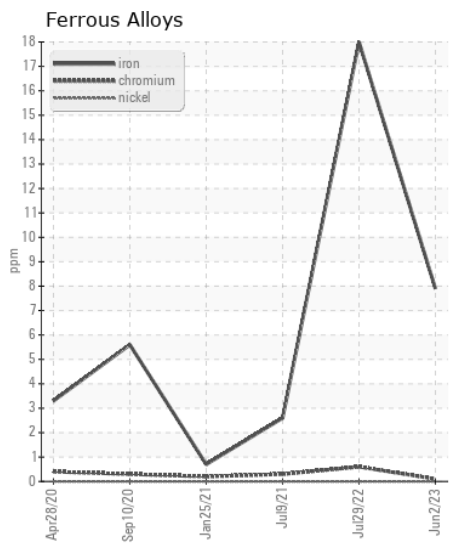
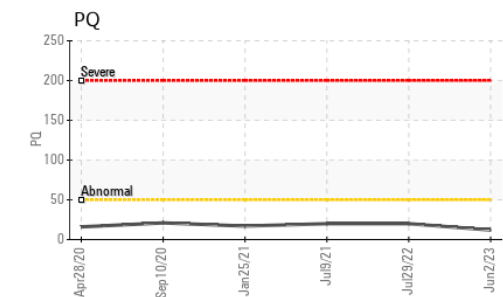
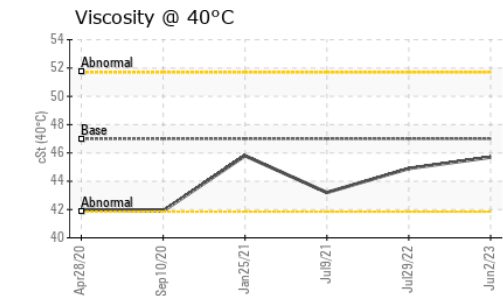
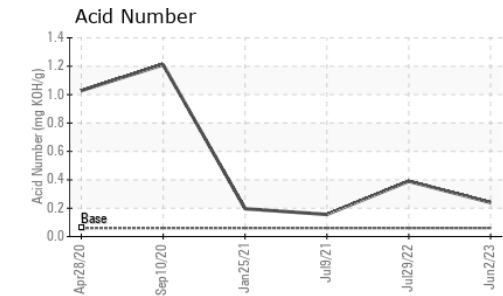
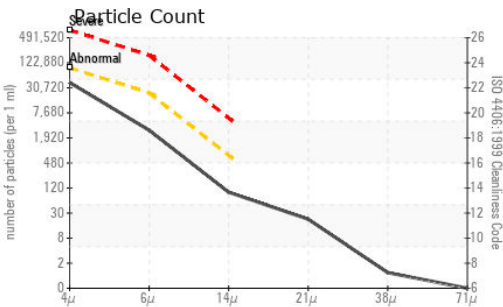
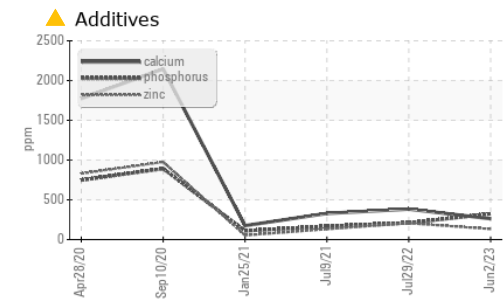
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	3	4	1
Potassium	ppm	ASTM D5185m	>20	2	2	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	35597	156770	40593
Particles >6µm		ASTM D7647	>20000	2574	38099	8589
Particles >14µm		ASTM D7647	>640	84	110	393
Particles >21µm		ASTM D7647	>160	19	14	45
Particles >38µm		ASTM D7647	>40	1	1	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	22/19/14	24/22/14	23/20/16
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	>0.075	NEG	NEG	NEG

FLUID CONDITION

Zinc level above manufacturer's recommendations. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m	>21	0	0	<1
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	<1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		6	6	5
Calcium	ppm	ASTM D5185m		262	383	329
Phosphorus	ppm	ASTM D5185m	827	324	210	167
Zinc	ppm	ASTM D5185m	0	▲ 133	▲ 206	▲ 131
Sulfur	ppm	ASTM D5185m	13	495	700	531
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.24	0.39	0.156
Visc @ 40°C	cSt	ASTM D445	47	45.7	44.9	43.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0038704 **Received** : 07 Jun 2023
Lab Number : 05866603 **Tested** : 08 Jun 2023
Unique Number : 10506387 **Diagnosed** : 08 Jun 2023 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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Certificate L2367
 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)