



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Area
Store 2 - Beaver [RO#147415]
Machine Id
JOHN DEERE 350G 1FF350GXVEF810462
Component
Hydraulic System
Fluid
HITACHI HYDRAULIC SUPER EX 46HN (77 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. Oil and filter change at the time of sampling has been noted. (Customer Sample Comment: Changed oil/filter sampled new oil .)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0046863	LEC0026549	LEC0011949
Sample Date		Client Info		07 Feb 2024	30 Dec 2021	15 May 2020
Machine Age	hrs	Client Info		9500	8034	6487
Oil Age	hrs	Client Info		1	8034	6487
Filter Age	hrs	Client Info		1	1547	1917
Oil Changed		Client Info		Changed	Not Chngd	Not Chngd
Filter Changed		Client Info		Changed	Not Chngd	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	13	16	13
Iron	ppm	ASTM D5185m	>32	2	13	17
Chromium	ppm	ASTM D5185m	>9	<1	1	1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>9	<1	▲ 8	6
Lead	ppm	ASTM D5185m	>28	0	<1	<1
Copper	ppm	ASTM D5185m	>50	<1	2	3
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	VLITE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

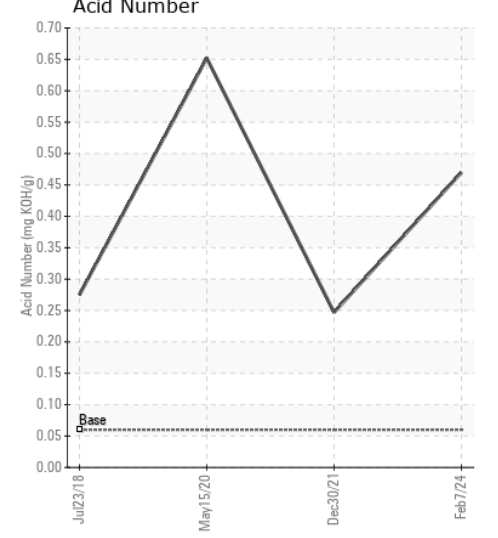
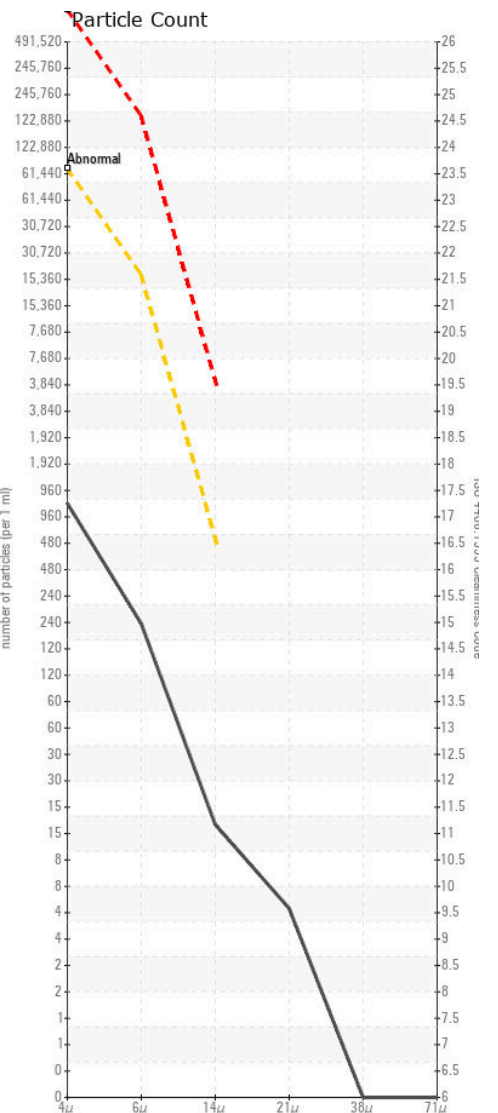
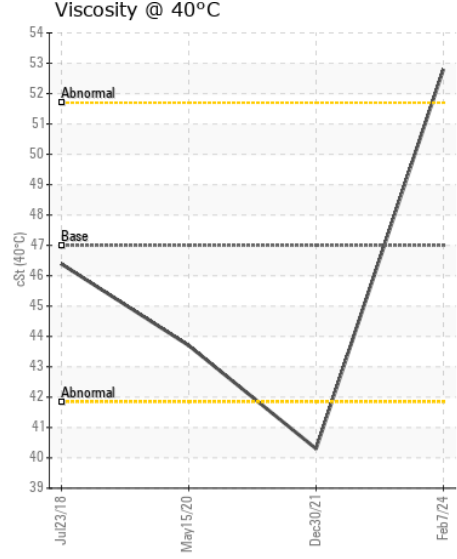
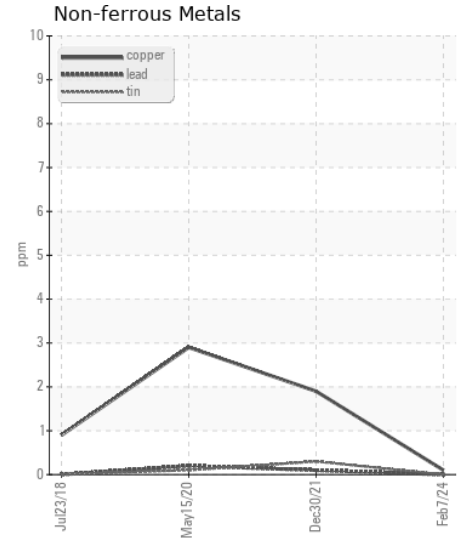
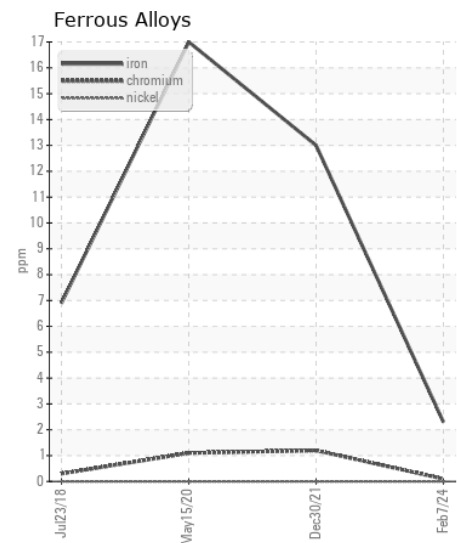
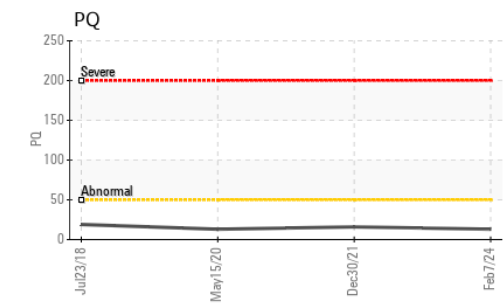
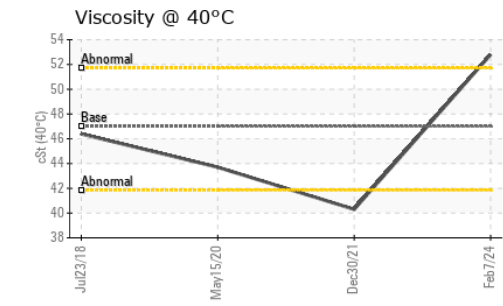
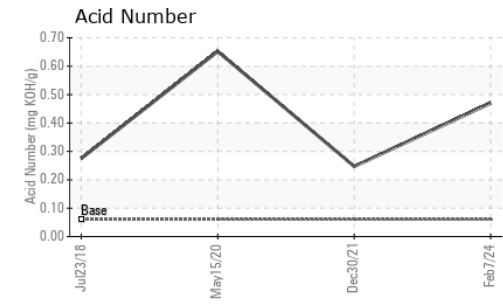
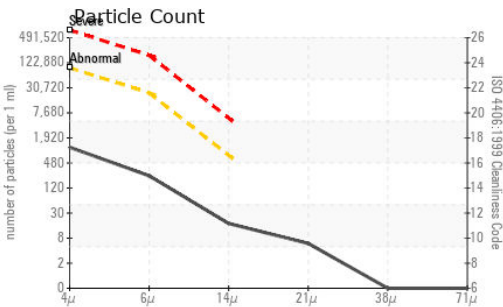
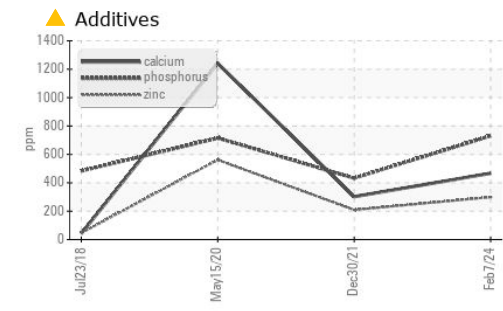
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	4	▲ 17	13
Potassium	ppm	ASTM D5185m	>20	<1	2	2
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	1004	69631	66101
Particles >6µm		ASTM D7647	>20000	208	4368	3013
Particles >14µm		ASTM D7647	>640	15	31	20
Particles >21µm		ASTM D7647	>160	5	7	12
Particles >38µm		ASTM D7647	>40	0	2	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	17/15/11	23/19/12	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

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

Sodium	ppm	ASTM D5185m	>21	1	1	3
Boron	ppm	ASTM D5185m		14	9	44
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		14	<1	2
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		60	8	28
Calcium	ppm	ASTM D5185m		467	302	1241
Phosphorus	ppm	ASTM D5185m	827	731	432	715
Zinc	ppm	ASTM D5185m	0	▲ 299	▲ 209	▲ 561
Sulfur	ppm	ASTM D5185m	13	851	833	1222
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.47	0.247	0.652
Visc @ 40°C	cSt	ASTM D445	47	52.8	40.3	43.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0046863 **Received** : 08 Feb 2024
Lab Number : 06084299 **Tested** : 09 Feb 2024
Unique Number : 10871744 **Diagnosed** : 12 Feb 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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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)