



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 1FF350GXVKF814250

Component
Hydraulic System

Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0195854	JR0126454	---
Sample Date		Client Info		06 Feb 2024	07 Apr 2022	---
Machine Age	hrs	Client Info		6877	4113	---
Oil Age	hrs	Client Info		1000	0	---
Filter Age	hrs	Client Info		1000	0	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changd	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	14	18	---
Iron	ppm	ASTM D5185m	>32	13	5	---
Chromium	ppm	ASTM D5185m	>9	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	0	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>9	2	2	---
Lead	ppm	ASTM D5185m	>28	0	<1	---
Copper	ppm	ASTM D5185m	>50	1	1	---
Tin	ppm	ASTM D5185m	>5	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	LIGHT	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

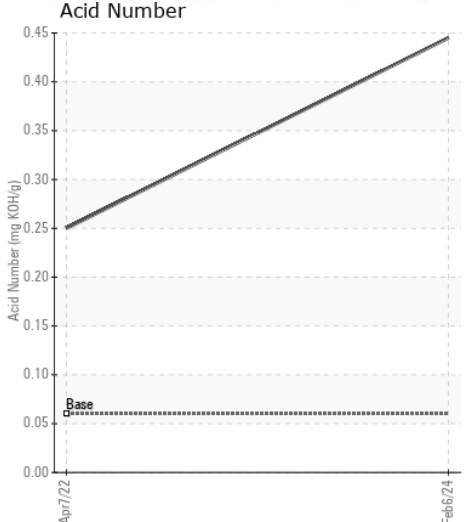
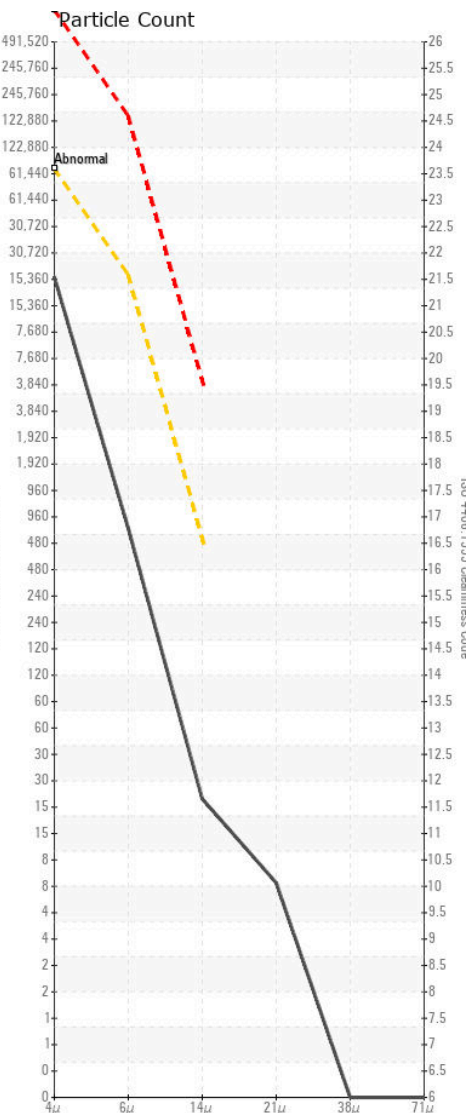
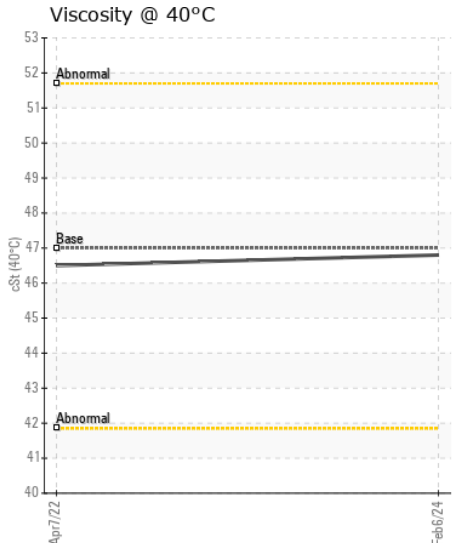
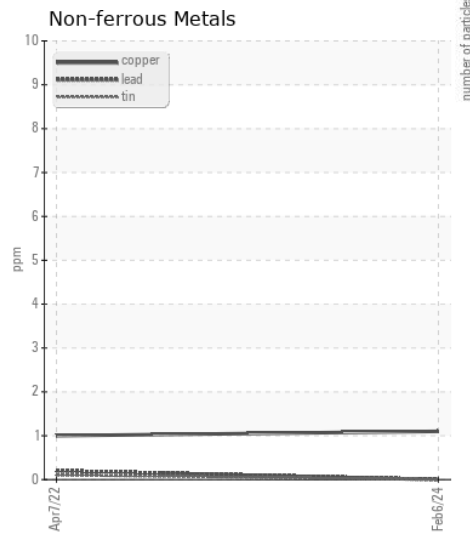
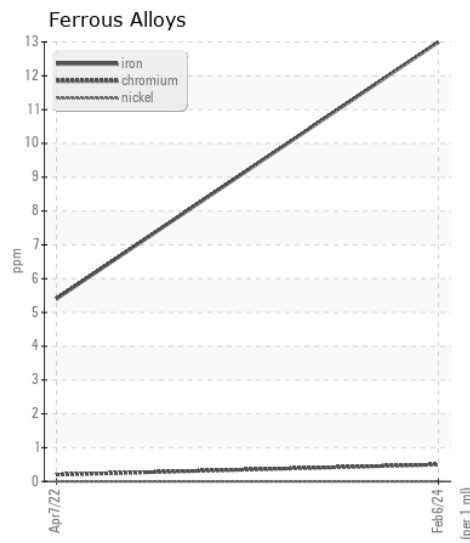
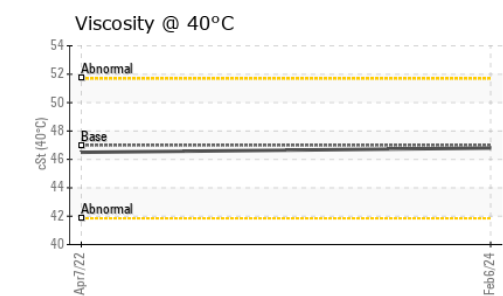
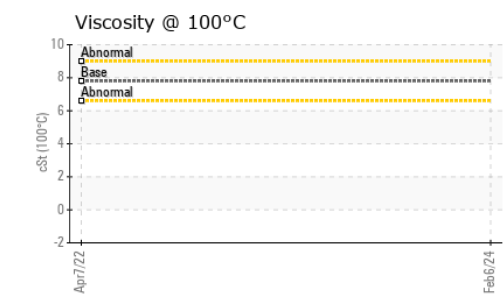
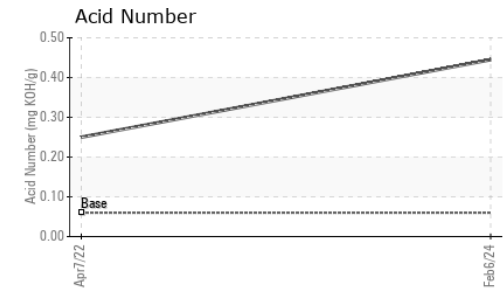
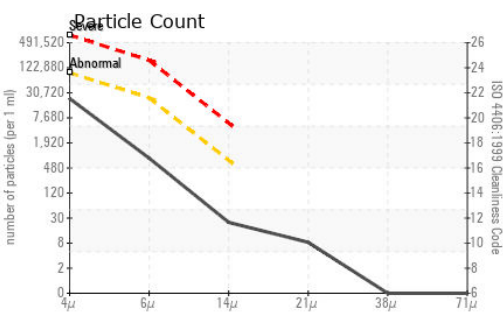
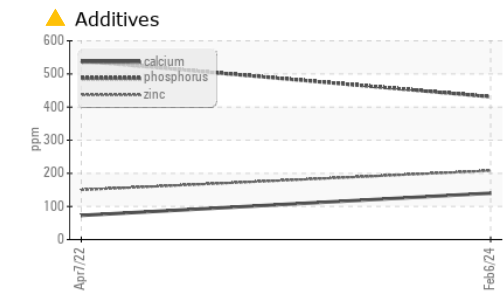
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	5	2	---
Potassium	ppm	ASTM D5185m	>20	2	1	---
Water		WC Method	>0.075	NEG	NEG	---
Particles >4µm		ASTM D7647	>80000	19485	8577	---
Particles >6µm		ASTM D7647	>20000	724	1146	---
Particles >14µm		ASTM D7647	>640	21	50	---
Particles >21µm		ASTM D7647	>160	7	8	---
Particles >38µm		ASTM D7647	>40	0	0	---
Particles >71µm		ASTM D7647	>10	0	0	---
Oil Cleanliness		ISO 4406 (c)	>23/21/16	21/17/12	20/17/13	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.075	NEG	NEG	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>21	2	0	---
Boron	ppm	ASTM D5185m		3	1	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		6	1	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		46	11	---
Calcium	ppm	ASTM D5185m		140	73	---
Phosphorus	ppm	ASTM D5185m	827	431	539	---
Zinc	ppm	ASTM D5185m	0	▲ 208	▲ 150	---
Sulfur	ppm	ASTM D5185m	13	582	378	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.445	0.25	---
Visc @ 40°C	cSt	ASTM D445	47	46.8	46.5	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0195854
Lab Number : 06098903
Unique Number : 10897133
Test Package : CONST (Additional Tests: FT-IR, FuelDilution, KV100, PercentFuel, PQ, PrtCount, TAN MAN, TBN, C)

TOTAL DEVELOPMENT SOLUTIONS LLC
 7805 PROGRESS CT
 GAINESVILLE, VA
 US 20155
 Contact: JOE SEALE

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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