



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
Store 1 - Cowen [142220]
 Machine Id
JOHN DEERE 85G 1FF085GXVJJ019833
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (27 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. The oil change at the time of sampling has been noted.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0043518	LEC0019367	---
Sample Date		Client Info		16 Aug 2023	27 Apr 2021	---
Machine Age	hrs	Client Info		1058	339	---
Oil Age	hrs	Client Info		1058	339	---
Filter Age	hrs	Client Info		1058	339	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	12	20	---
Iron	ppm	ASTM D5185m	>32	10	8	---
Chromium	ppm	ASTM D5185m	>9	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>9	1	0	---
Lead	ppm	ASTM D5185m	>28	<1	<1	---
Copper	ppm	ASTM D5185m	>50	5	4	---
Tin	ppm	ASTM D5185m	>5	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

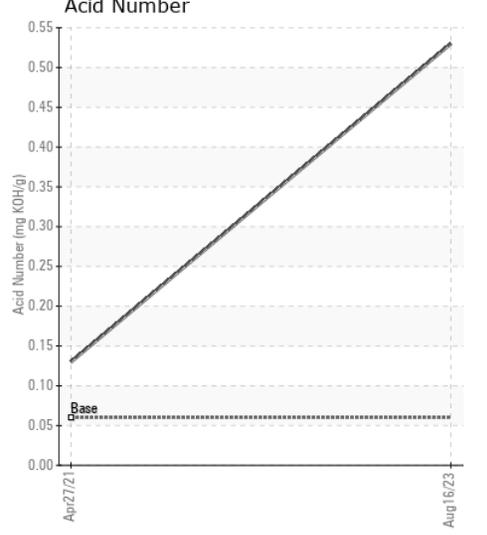
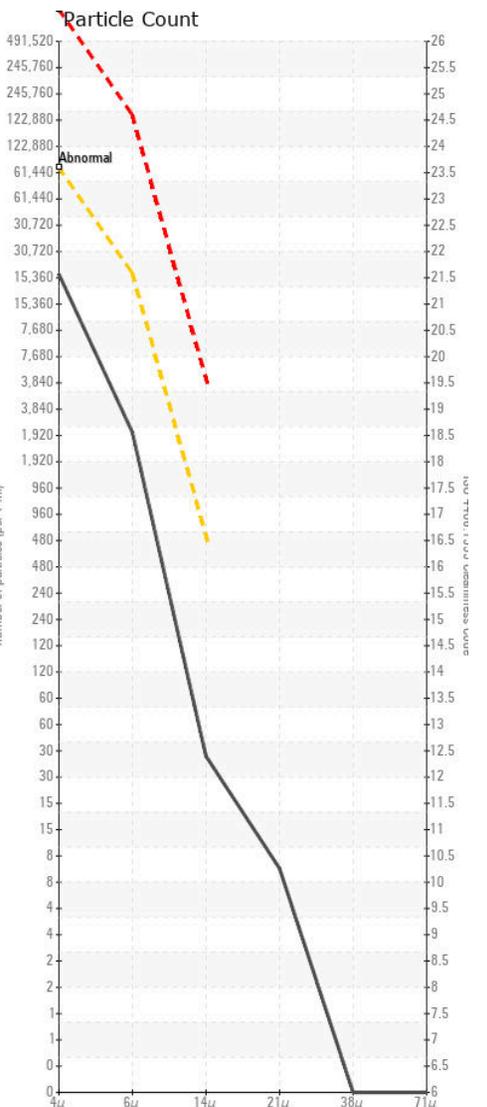
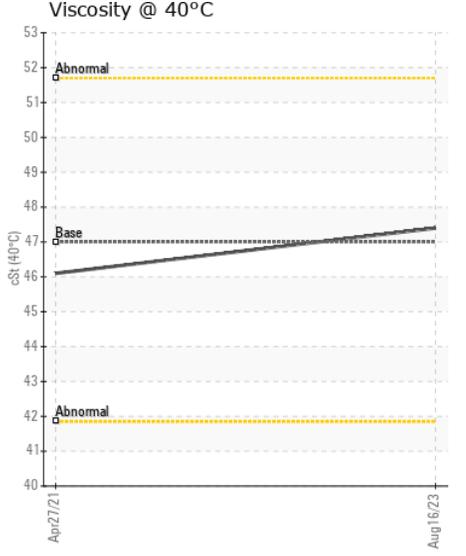
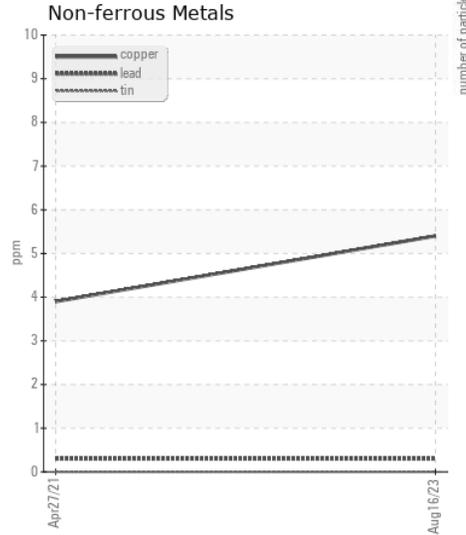
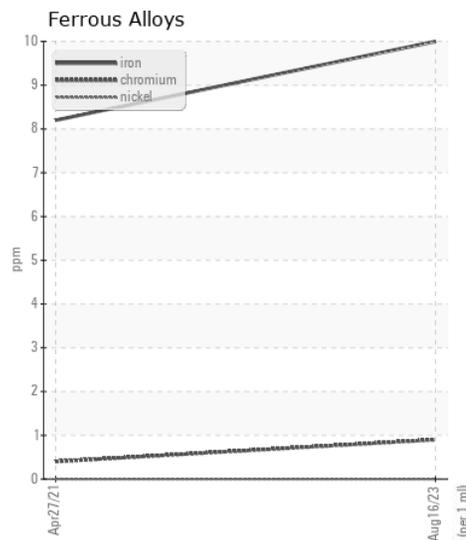
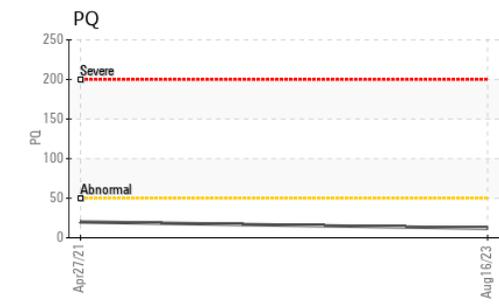
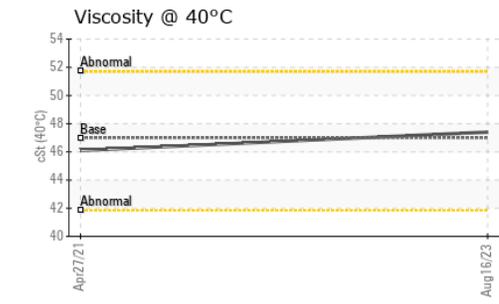
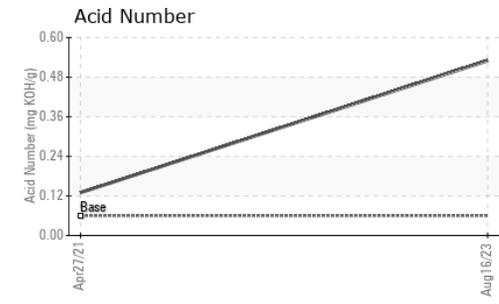
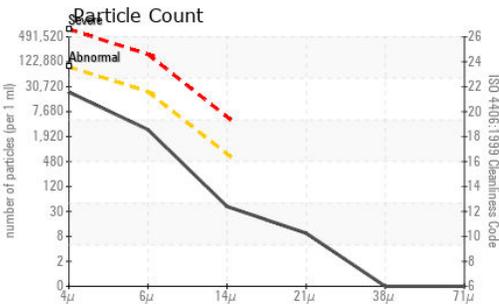
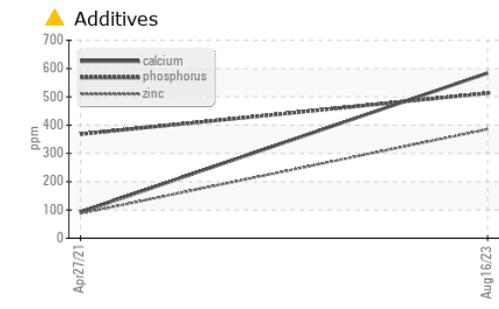
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>11	2	<1	---
Potassium	ppm	ASTM D5185m	>20	1	<1	---
Water		WC Method	>0.075	NEG	NEG	---
Particles >4µm		ASTM D7647	>80000	19733	21088	---
Particles >6µm		ASTM D7647	>20000	2467	1738	---
Particles >14µm		ASTM D7647	>640	35	31	---
Particles >21µm		ASTM D7647	>160	8	9	---
Particles >38µm		ASTM D7647	>40	0	0	---
Particles >71µm		ASTM D7647	>10	0	0	---
Oil Cleanliness		ISO 4406 (c)	>23/21/16	21/18/12	22/18/12	---
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	0	<1	---
Boron	ppm	ASTM D5185m		0	1	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		<1	0	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m		14	15	---
Calcium	ppm	ASTM D5185m		584	92	---
Phosphorus	ppm	ASTM D5185m	827	513	368	---
Zinc	ppm	ASTM D5185m	0	▲ 385	▲ 87	---
Sulfur	ppm	ASTM D5185m	13	1972	1284	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.53	0.130	---
Visc @ 40°C	cSt	ASTM D445	47	47.4	46.1	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0043518 **Received** : 18 Aug 2023
Lab Number : 05928725 **Tested** : 21 Aug 2023
Unique Number : 10608672 **Diagnosed** : 22 Aug 2023 - 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)