



OIL ANALYSIS REPORT

WEAR	MARGINAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
{unassigned}
Machine Id
JOHN DEERE 644K 1DW644KZJKF694571
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (28 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		LEC0043744	LEC0027572	LEC0020076
Sample Date		Client Info		01 Aug 2023	16 Feb 2022	07 Apr 2021
Machine Age	hrs	Client Info		3330	1870	1224
Oil Age	hrs	Client Info		3330	1870	1224
Filter Age	hrs	Client Info		3330	1870	1224
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				MARGINAL	NORMAL	NORMAL

WEAR

The chromium level is abnormal. All other component wear rates are normal.

PQ		ASTM D8184	>50	19	16	20
Iron	ppm	ASTM D5185m	>71	28	15	11
Chromium	ppm	ASTM D5185m	>11	▲ 13	11	6
Nickel	ppm	ASTM D5185m	>6	<1	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	<1	<1
Aluminum	ppm	ASTM D5185m	>11	2	2	1
Lead	ppm	ASTM D5185m	>13	0	<1	<1
Copper	ppm	ASTM D5185m	>21	3	3	3
Tin	ppm	ASTM D5185m	>5	0	0	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

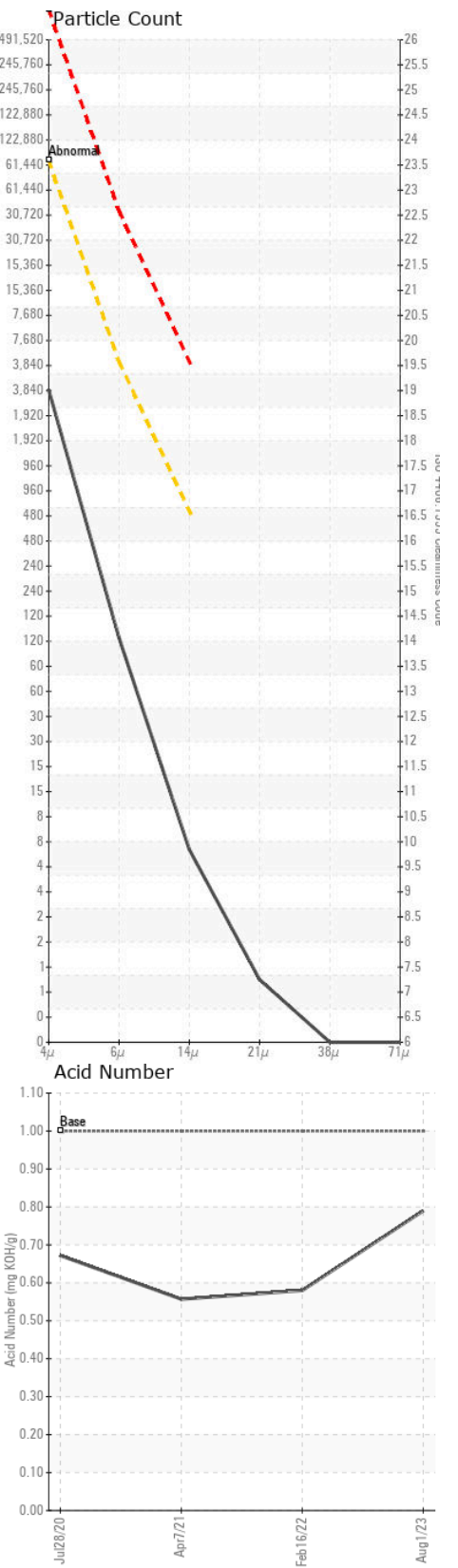
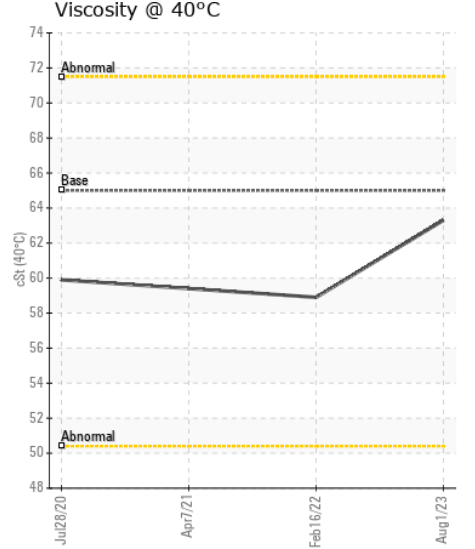
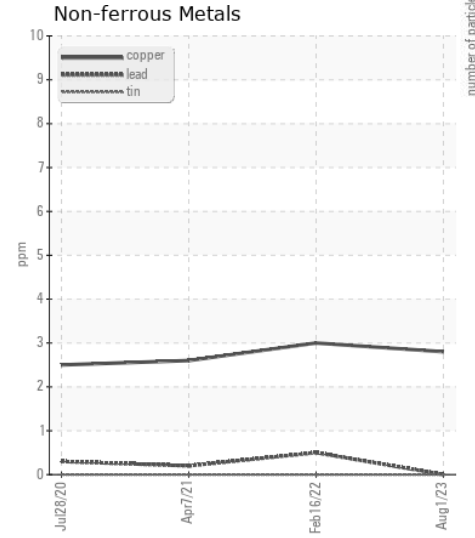
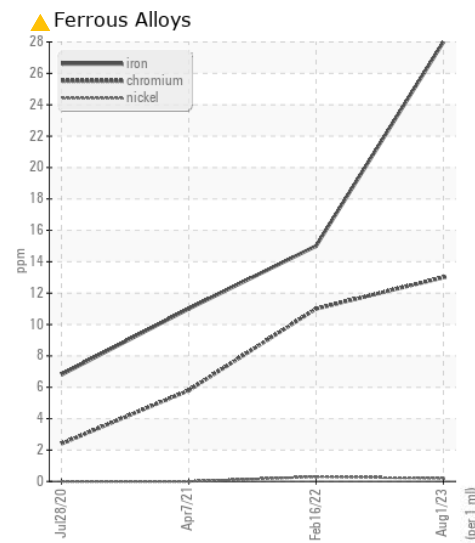
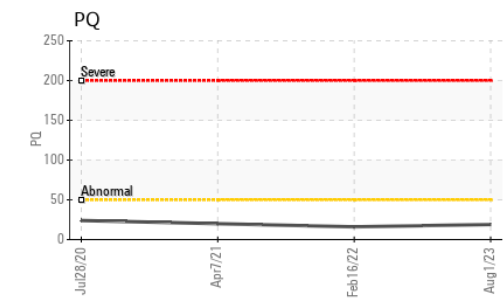
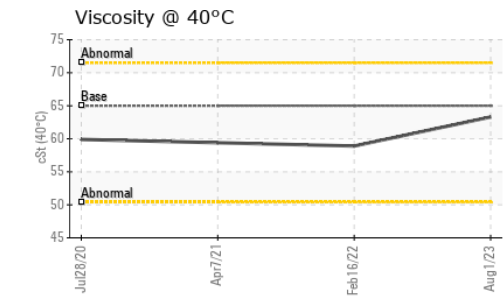
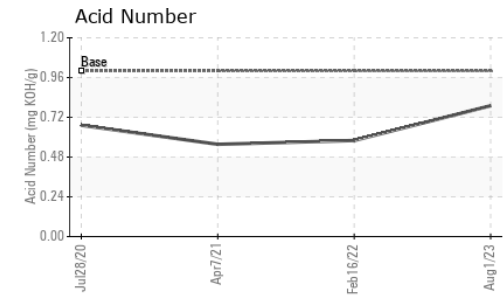
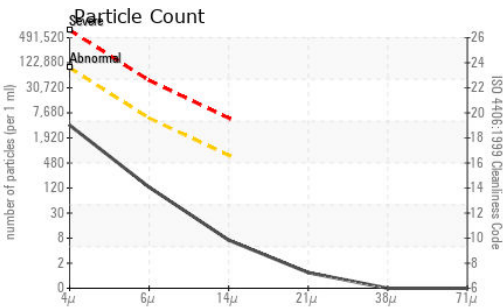
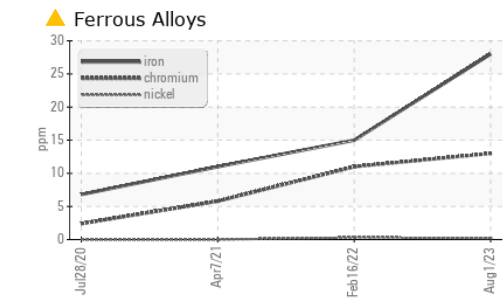
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>24	4	3	2
Potassium	ppm	ASTM D5185m	>20	7	5	4
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	3380	12142	7487
Particles >6µm		ASTM D7647	>5000	111	389	185
Particles >14µm		ASTM D7647	>640	6	26	20
Particles >21µm		ASTM D7647	>160	1	5	6
Particles >38µm		ASTM D7647	>40	0	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	19/14/10	21/16/12	20/15/11
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>21	2	3	4
Boron	ppm	ASTM D5185m		50	0	1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		15	2	1
Calcium	ppm	ASTM D5185m	87	550	95	83
Phosphorus	ppm	ASTM D5185m	727	670	606	548
Zinc	ppm	ASTM D5185m	900	906	859	805
Sulfur	ppm	ASTM D5185m	1500	2167	1522	1298
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.79	0.58	0.557
Visc @ 40°C	cSt	ASTM D445	65	63.3	58.9	59.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0043744 **Received** : 03 Aug 2023
Lab Number : 05915251 **Tested** : 04 Aug 2023
Unique Number : 10587165 **Diagnosed** : 06 Aug 2023 - Doug Bogart
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)