



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 644K 1DW644KZLDE656661
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0218410	JR0148008	JR0123929
Sample Date		Client Info		11 Jun 2024	28 Mar 2023	06 Jun 2022
Machine Age	hrs	Client Info		7978	7458	6437
Oil Age	hrs	Client Info		0	0	2500
Filter Age	hrs	Client Info		0	0	2500
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	19	16	22
Iron	ppm	ASTM D5185m	>71	12	13	12
Chromium	ppm	ASTM D5185m	>11	6	6	5
Nickel	ppm	ASTM D5185m	>6	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		1	1	3
Aluminum	ppm	ASTM D5185m	>11	7	6	5
Lead	ppm	ASTM D5185m	>13	24	21	21
Copper	ppm	ASTM D5185m	>21	13	13	12
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

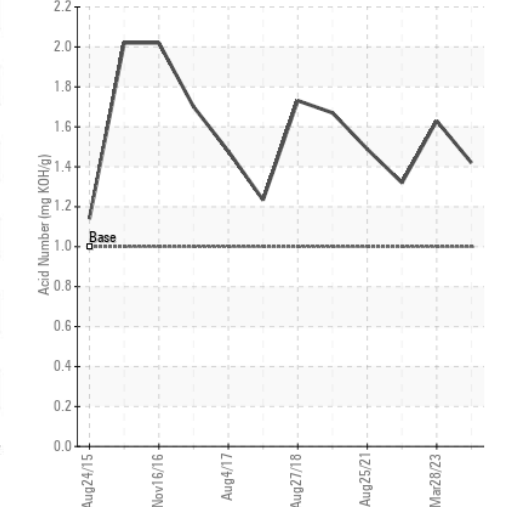
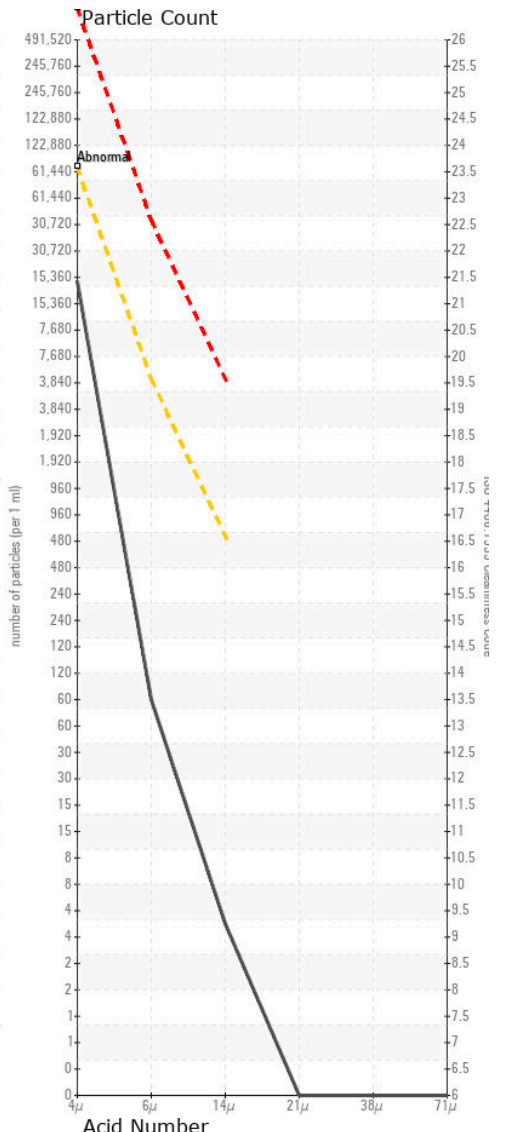
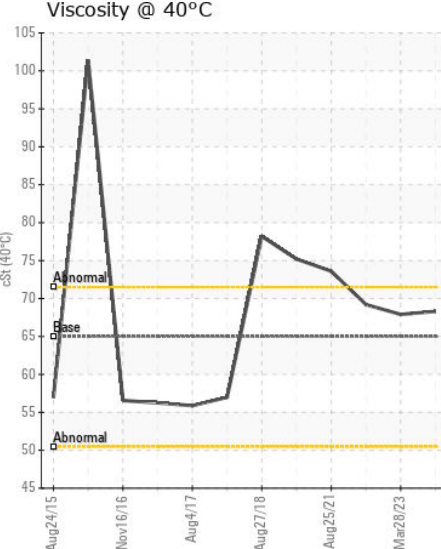
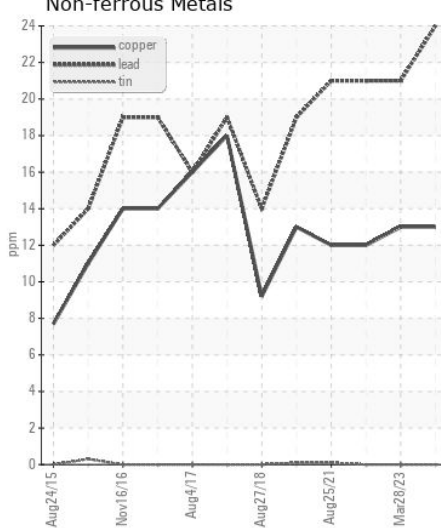
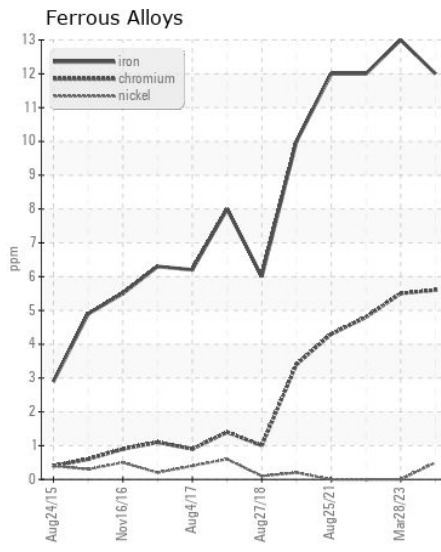
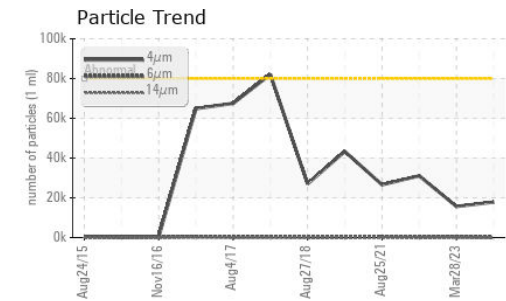
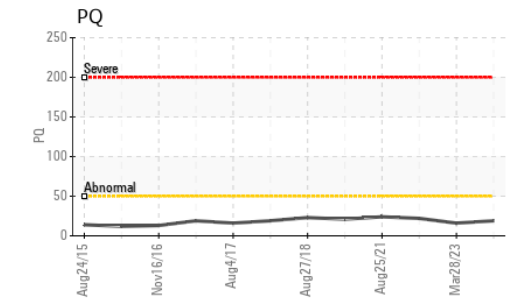
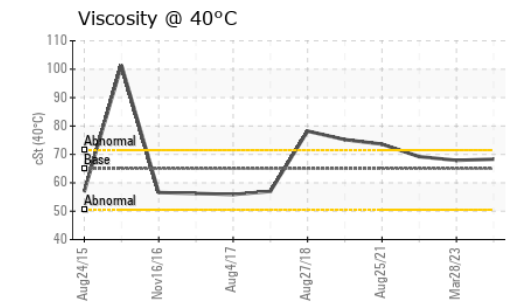
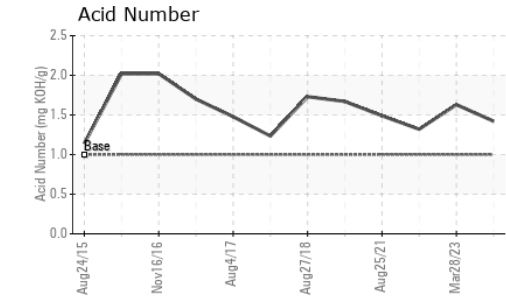
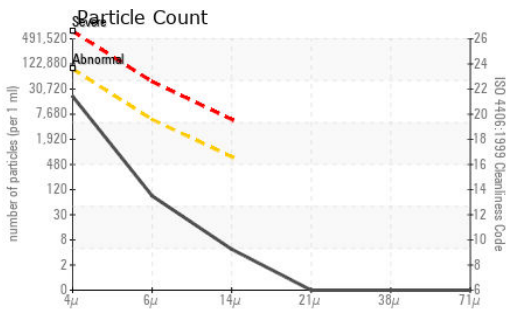
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>24	9	9	8
Potassium	ppm	ASTM D5185m	>20	4	<1	0
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	17848	15639	31047
Particles >6µm		ASTM D7647	>5000	75	379	139
Particles >14µm		ASTM D7647	>640	4	30	17
Particles >21µm		ASTM D7647	>160	0	9	5
Particles >38µm		ASTM D7647	>40	0	2	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	21/13/9	21/16/12	22/14/11
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

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

Sodium	ppm	ASTM D5185m	>21	12	10	9
Boron	ppm	ASTM D5185m		130	158	156
Barium	ppm	ASTM D5185m		<1	0	1
Molybdenum	ppm	ASTM D5185m		111	112	115
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		461	451	449
Calcium	ppm	ASTM D5185m	87	2025	2023	1961
Phosphorus	ppm	ASTM D5185m	727	999	943	947
Zinc	ppm	ASTM D5185m	900	1172	1116	1173
Sulfur	ppm	ASTM D5185m	1500	3868	3924	3276
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	1.42	1.63	1.32
Visc @ 40°C	cSt	ASTM D445	65	68.3	67.9	69.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0218410 **Received** : 20 Jun 2024
Lab Number : 06215719 **Tested** : 21 Jun 2024
Unique Number : 11088583 **Diagnosed** : 22 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

R.J. SMITH
 1711 REYMET RD
 RICHMOND, VA
 US 23237
 Contact: KIRBY MAITLAND

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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