



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 644K 1DW644KZAJF690443
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (9 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0193586	JR0173803	JR0154850
Sample Date		Client Info		04 Jan 2024	06 Jun 2023	01 Feb 2023
Machine Age	hrs	Client Info		7050	6529	6101
Oil Age	hrs	Client Info		4551	6529	1001
Filter Age	hrs	Client Info		4551	0	1001
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	N/A	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	18	16	17
Iron	ppm	ASTM D5185m	>71	12	13	12
Chromium	ppm	ASTM D5185m	>11	12	11	9
Nickel	ppm	ASTM D5185m	>6	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>11	2	1	1
Lead	ppm	ASTM D5185m	>13	0	0	0
Copper	ppm	ASTM D5185m	>21	2	2	2
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

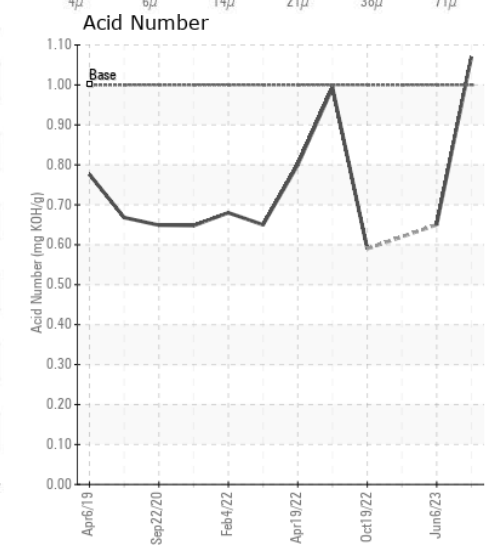
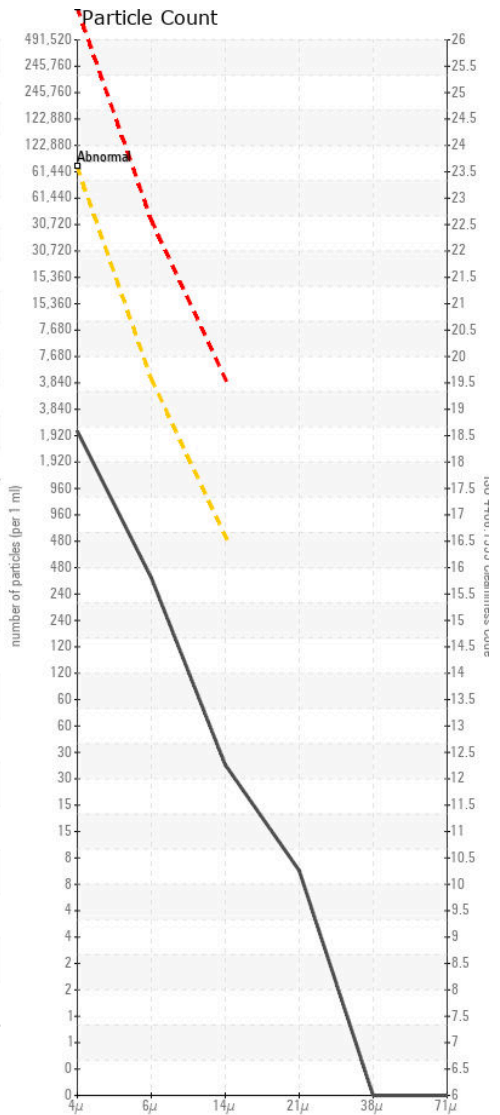
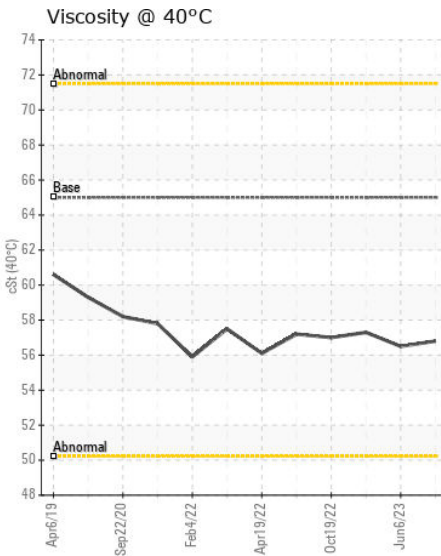
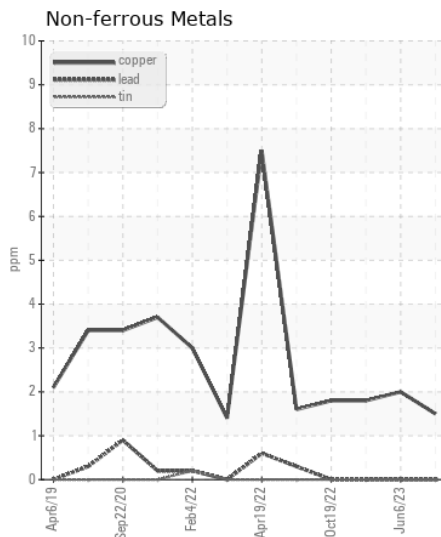
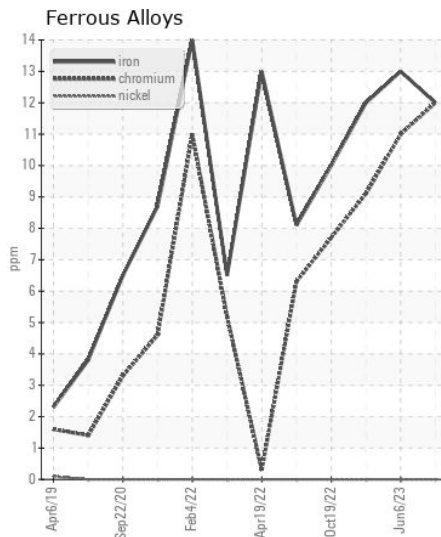
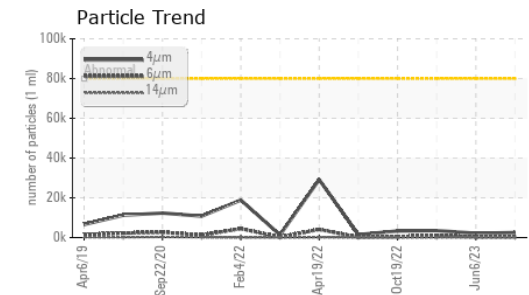
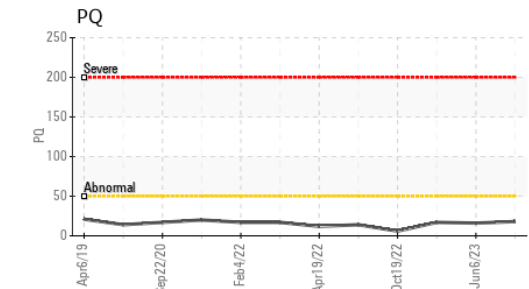
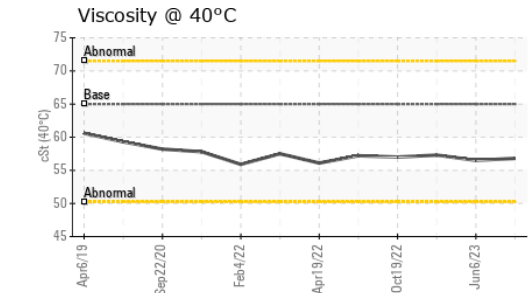
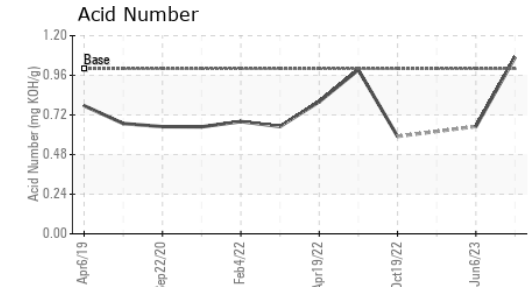
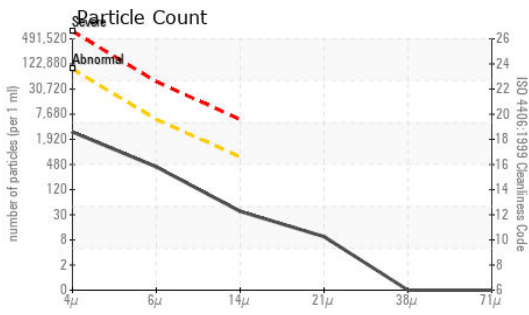
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>24	3	2	2
Potassium	ppm	ASTM D5185m	>20	2	<1	3
Water		WC Method	>0.075	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	2512	2159	3527
Particles >6µm		ASTM D7647	>5000	370	367	1000
Particles >14µm		ASTM D7647	>640	32	16	74
Particles >21µm		ASTM D7647	>160	8	3	13
Particles >38µm		ASTM D7647	>40	0	0	1
Particles >71µm		ASTM D7647	>10	0	0	1
Oil Cleanliness		ISO 4406 (c)	>23/19/16	19/16/12	18/16/11	19/17/13
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	VLITE
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	<1	<1	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		0	1	1
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		4	4	6
Calcium	ppm	ASTM D5185m	87	138	145	144
Phosphorus	ppm	ASTM D5185m	727	647	584	607
Zinc	ppm	ASTM D5185m	900	817	808	813
Sulfur	ppm	ASTM D5185m	1500	1605	1909	1584
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	1.07	0.65	---
Visc @ 40°C	cSt	ASTM D445	65	56.8	56.5	57.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0193586 **Received** : 10 Jan 2024
Lab Number : 06056590 **Diagnosed** : 11 Jan 2024
Unique Number : 10822539 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PQ)

Certificate L2367

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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