



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[W9152]

Machine Id

JOHN DEERE 644L 1DW644LZLLL705687

Component

Hydraulic System

Fluid

JOHN DEERE HYDRAU (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: W9152)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0224169	JR0212673	JR0183352
Sample Date		Client Info		09 Jul 2024	21 May 2024	09 Oct 2023
Machine Age	hrs	Client Info		4643	4643	4254
Oil Age	hrs	Client Info		3362	0	3807
Filter Age	hrs	Client Info		0	0	2254
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	16	20	16
Chromium	ppm	ASTM D5185m	>10	8	8	8
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>10	4	5	4
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	0	<1	1
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

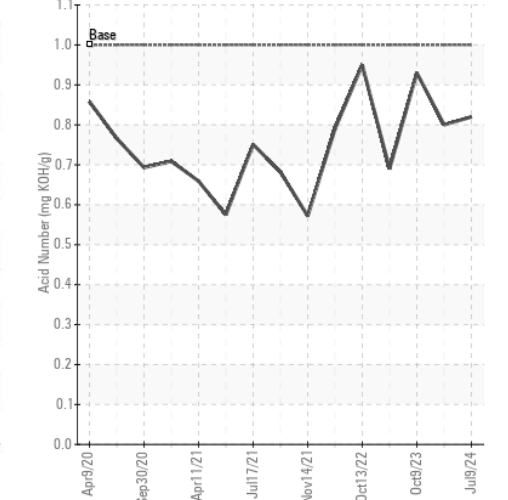
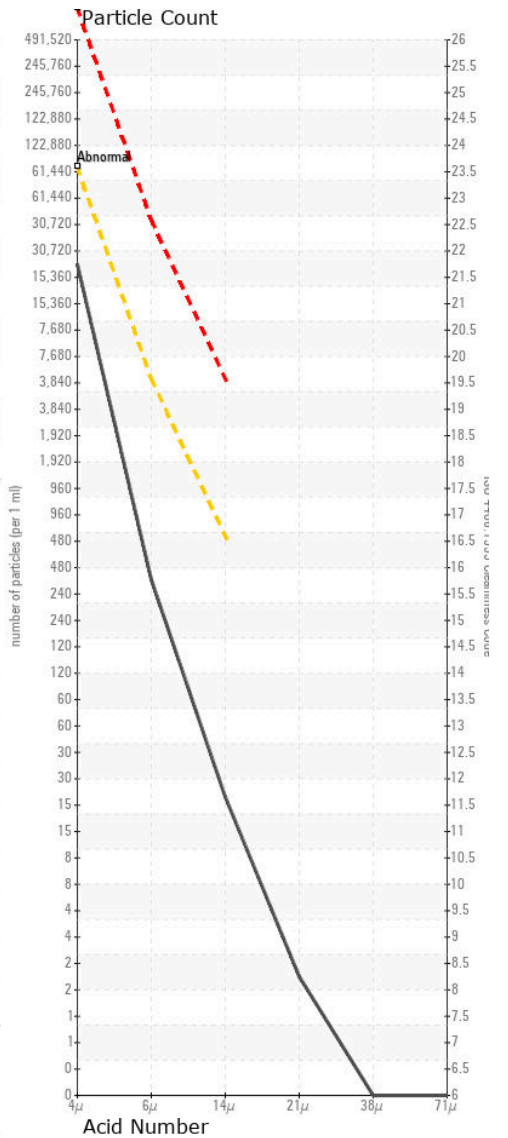
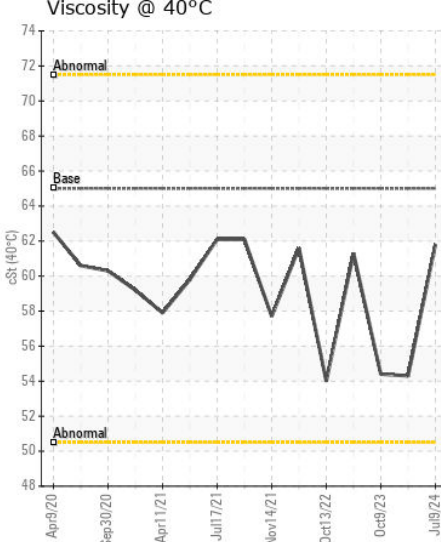
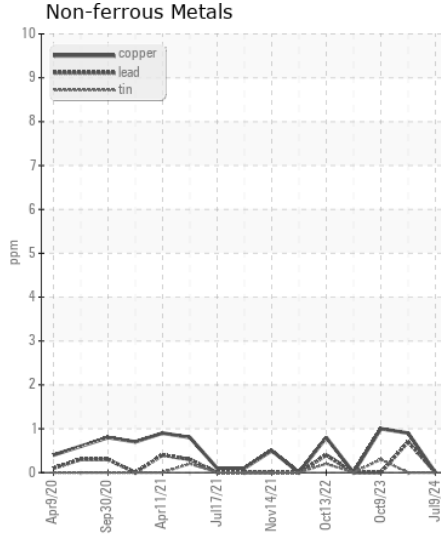
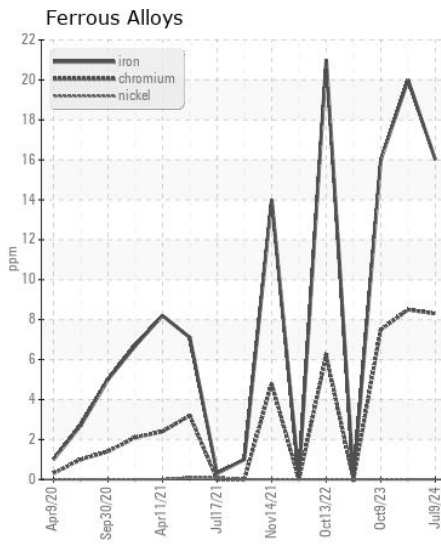
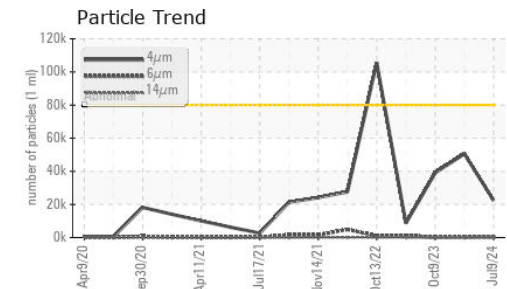
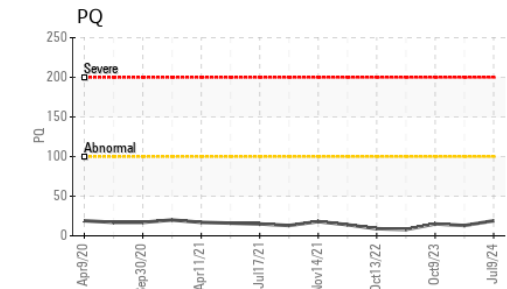
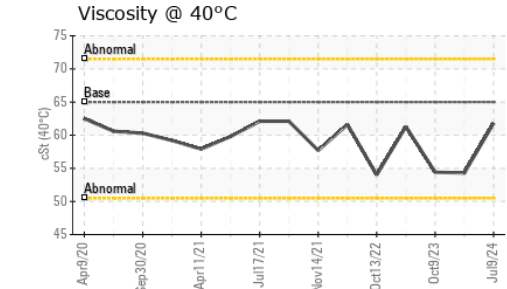
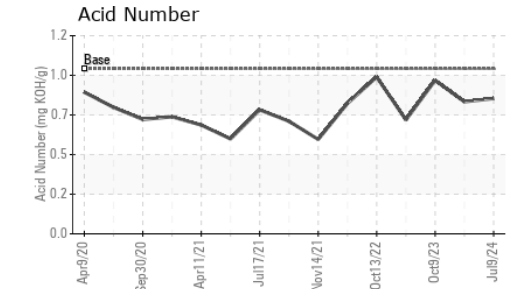
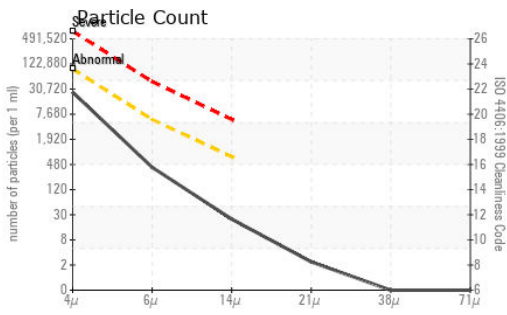
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	6	6	5
Potassium	ppm	ASTM D5185m	>20	2	6	3
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>80000	22453	50545	▲ 39033
Particles >6µm		ASTM D7647	>5000	361	307	117
Particles >14µm		ASTM D7647	>640	21	9	5
Particles >21µm		ASTM D7647	>160	2	2	1
Particles >38µm		ASTM D7647	>40	0	0	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	22/16/12	23/15/10	▲ 22/14/10
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	>0.1	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		4	6	5
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		41	37	38
Calcium	ppm	ASTM D5185m	87	1246	1281	1132
Phosphorus	ppm	ASTM D5185m	727	809	783	711
Zinc	ppm	ASTM D5185m	900	963	926	848
Sulfur	ppm	ASTM D5185m	1500	2584	2509	1950
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.82	0.80	0.93
Visc @ 40°C	cSt	ASTM D445	65	61.8	54.3	54.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0224169 **Received** : 11 Jul 2024
Lab Number : 06233191 **Tested** : 12 Jul 2024
Unique Number : 11116684 **Diagnosed** : 12 Jul 2024 - Don Baldridge
Test Package : MOBCE (Additional Tests: PQ)

JRE - HOPE MILLS/FAYETTEVILLE
 5039 HWY 301 SOUTH
 HOPE MILLS, NC
 US 28348

Contact: FAYETTEVILLE SHOP
 stephen.mullis@jamesriverequipment.com; panastasio@wearcheck.com

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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F: