



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 644L 1DW644LZJLL706347

Component
Hydraulic System

Fluid
JOHN DEERE HYDRAU (100 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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		JR0226181	JR0208972	JR0200666
Sample Date		Client Info		14 Jul 2024	19 Apr 2024	09 Feb 2024
Machine Age	hrs	Client Info		7971	7471	6993
Oil Age	hrs	Client Info		7021	6993	472
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

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

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		17	15	13
Iron	ppm	ASTM D5185m	>20	17	14	13
Chromium	ppm	ASTM D5185m	>10	▲ 12	10	9
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	2	2
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	<1	<1	1
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	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.

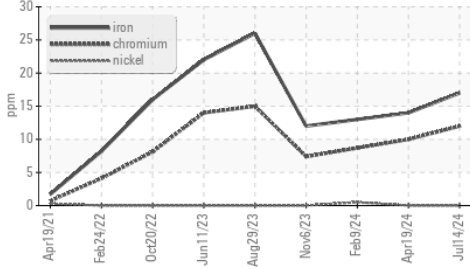
Silicon	ppm	ASTM D5185m	>20	5	3	3
Potassium	ppm	ASTM D5185m	>20	<1	<1	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	2240	686	809
Particles >6µm		ASTM D7647	>1300	701	189	236
Particles >14µm		ASTM D7647	>160	76	15	31
Particles >21µm		ASTM D7647	>40	16	4	8
Particles >38µm		ASTM D7647	>10	1	0	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/17/13	17/15/11	17/15/12
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

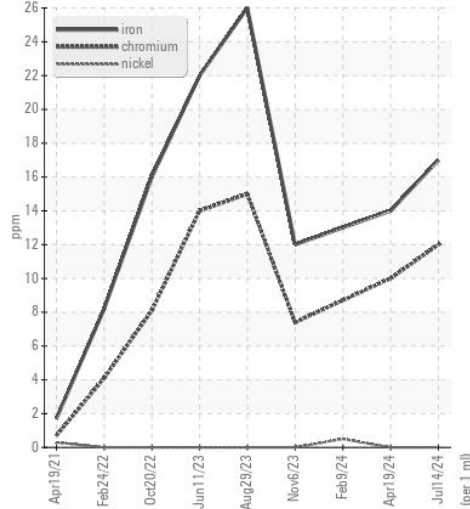
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	13
Molybdenum	ppm	ASTM D5185m		0	0	1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		6	4	6
Calcium	ppm	ASTM D5185m	87	205	213	204
Phosphorus	ppm	ASTM D5185m	727	675	549	670
Zinc	ppm	ASTM D5185m	900	832	780	839
Sulfur	ppm	ASTM D5185m	1500	1919	1907	1868
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.55	0.63	0.57
Visc @ 40°C	cSt	ASTM D445	65	56.6	58.0	58.13

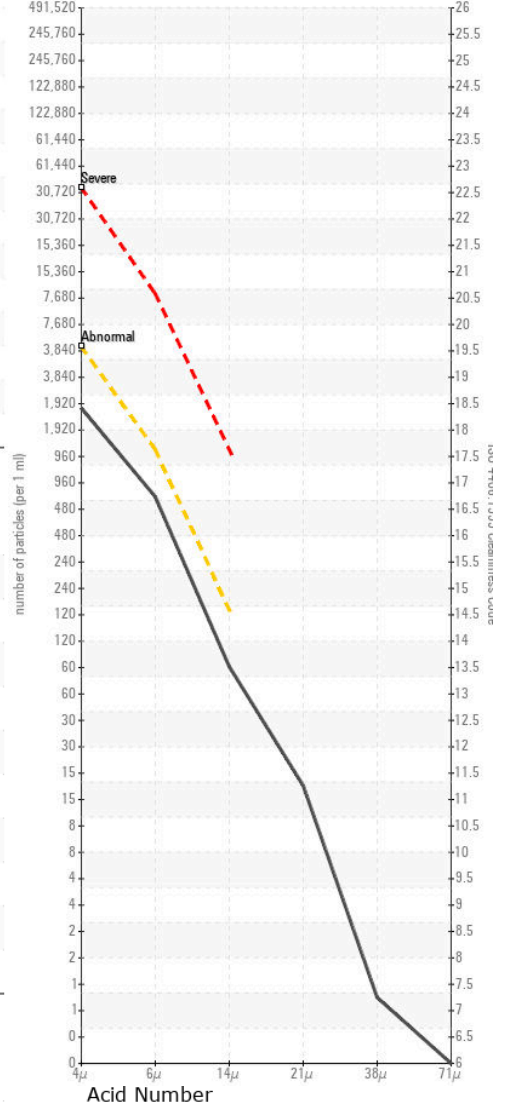
▲ Ferrous Alloys



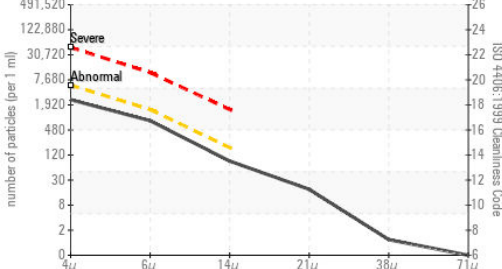
▲ Ferrous Alloys



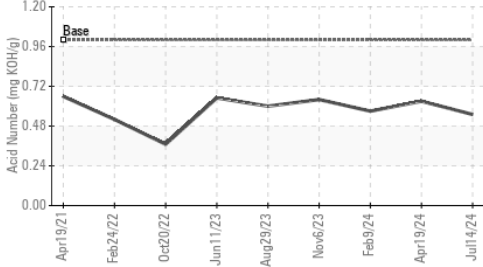
Particle Count



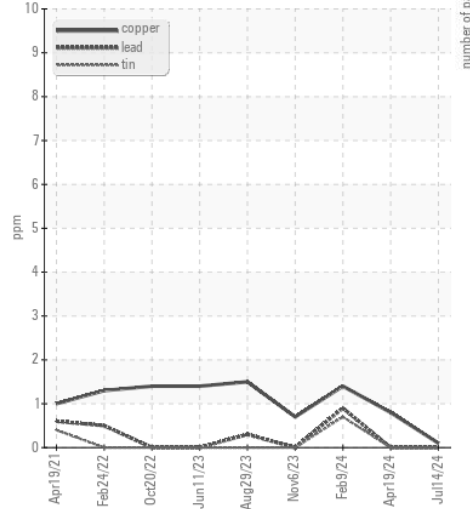
Particle Count



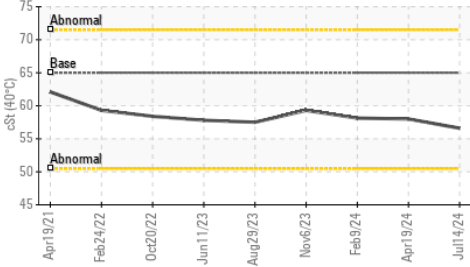
Acid Number



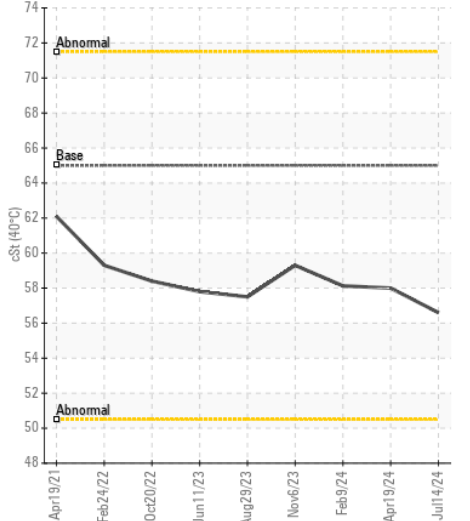
Non-ferrous Metals



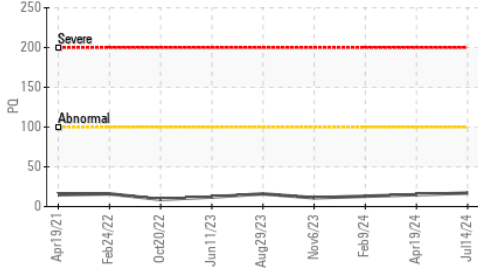
Viscosity @ 40°C



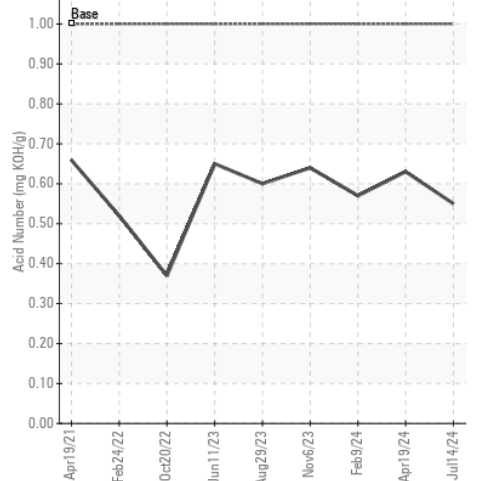
Viscosity @ 40°C



PQ



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0226181

Lab Number : 06237642

Unique Number : 11126476

Test Package : CONST (Additional Tests: PQ)

Received : 16 Jul 2024

Tested : 17 Jul 2024

Diagnosed : 18 Jul 2024 - Don Baldrige

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)

JRE - GREENVILLE

3604 HIGHWAY 264 E

GREENVILLE, NC

US 27834-5800

Contact: GREENVILLE SHOP

christopher.martin@jamesriverequipment.com

T:

F: