



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
CAROLINE
 Machine Id
JOHN DEERE 844K-III M02-0904 1DW844KCLJF692876
 Component
Hydraulic System
 Fluid
JOHN DEERE HYDRAU XR (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0180714	JR0147697	JR0165756
Sample Date		Client Info		16 Mar 2024	08 Dec 2023	06 Sep 2023
Machine Age	hrs	Client Info		9835	9244	8660
Oil Age	hrs	Client Info		3475	2884	2300
Filter Age	hrs	Client Info		1175	584	610
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		15	13	14
Iron	ppm	ASTM D5185m	>20	23	19	20
Chromium	ppm	ASTM D5185m	>10	▲ 18	▲ 16	▲ 17
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	4	4
Lead	ppm	ASTM D5185m	>10	0	2	0
Copper	ppm	ASTM D5185m	>75	5	4	4
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
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.

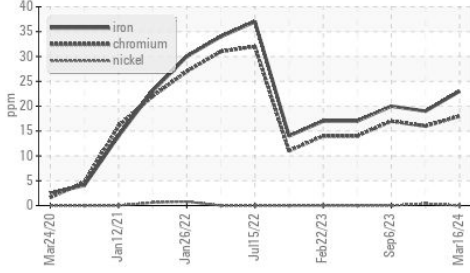
Silicon	ppm	ASTM D5185m	>20	8	7	6
Potassium	ppm	ASTM D5185m	>20	0	6	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	1530	2027	940
Particles >6µm		ASTM D7647	>1300	393	121	216
Particles >14µm		ASTM D7647	>160	26	13	30
Particles >21µm		ASTM D7647	>40	5	5	9
Particles >38µm		ASTM D7647	>10	0	1	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/16/12	18/14/11	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		9	7	8
Boron	ppm	ASTM D5185m		0	<1	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	3	3
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		13	18	12
Calcium	ppm	ASTM D5185m		718	796	662
Phosphorus	ppm	ASTM D5185m		788	884	757
Zinc	ppm	ASTM D5185m		942	1100	976
Sulfur	ppm	ASTM D5185m		2634	2788	2722
Acid Number (AN)	mg KOH/g	ASTM D8045		0.73	0.66	0.78
Visc @ 40°C	cSt	ASTM D445	43.1	47.5	47.9	47.1

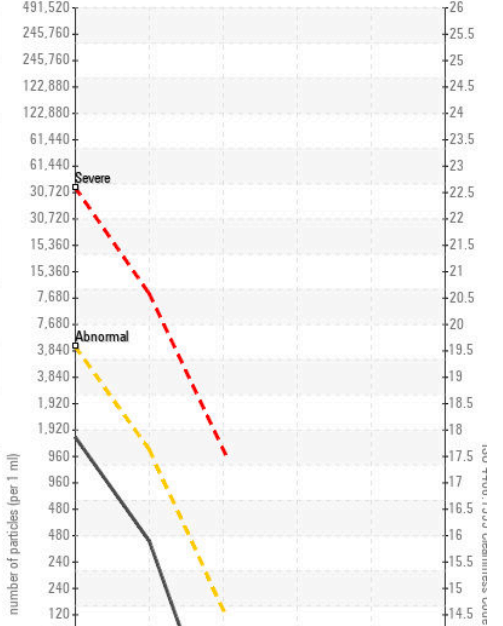
▲ Ferrous Alloys



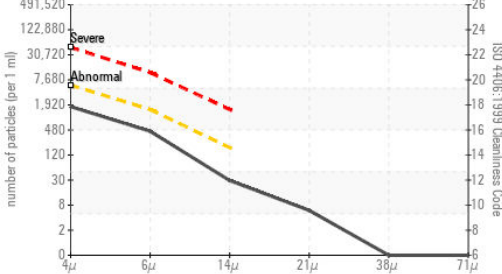
▲ Ferrous Alloys



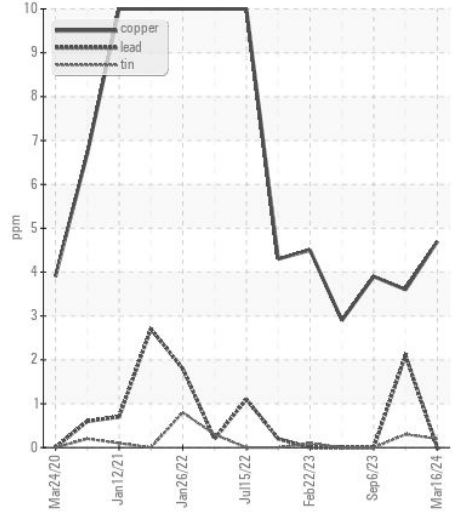
Particle Count



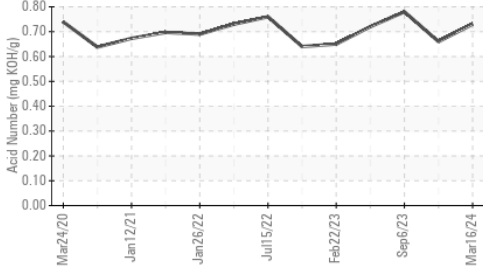
Particle Count



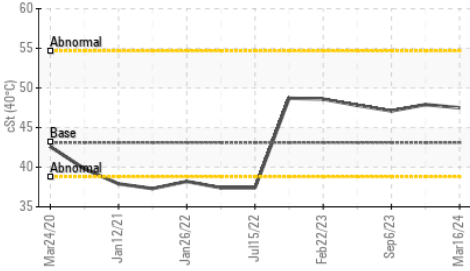
Non-ferrous Metals



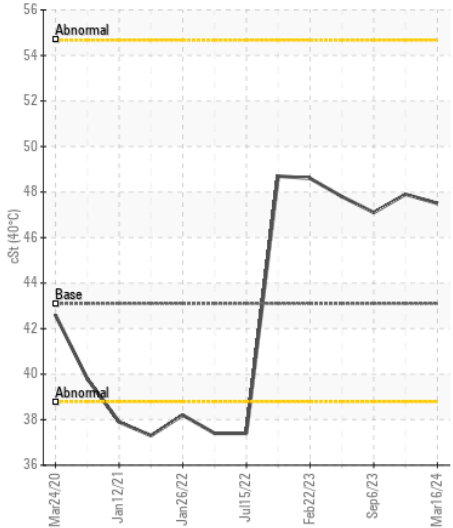
Acid Number



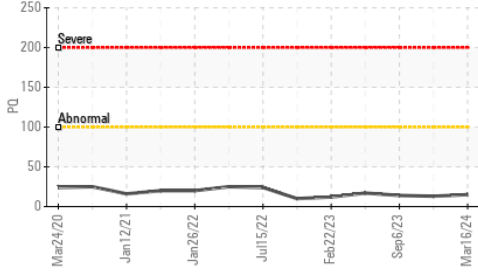
Viscosity @ 40°C



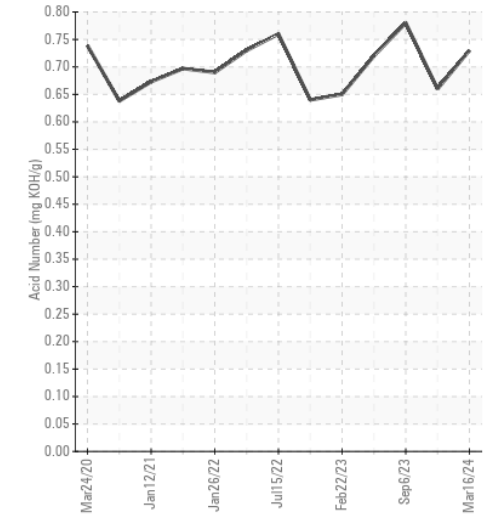
Viscosity @ 40°C



PQ



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0180714 **Received** : 21 Mar 2024
Lab Number : 06125591 **Tested** : 26 Mar 2024
Unique Number : 10939742 **Diagnosed** : 26 Mar 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: PQ)

LUCK STONE
 19380 RICHMOND TURNPIKE
 MILFORD, VA
 US 22514
 Contact: BRYAN MORRIS
 bmorris@luckstone.com
 T: (804)400-3630
 F: x:

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)