CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
Contracting
Machine Id
1DW310EXJNF716118 5111
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (9 GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

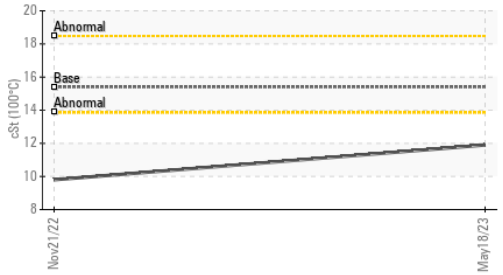
Sodium and/or potassium levels are high. Test for glycol is negative. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

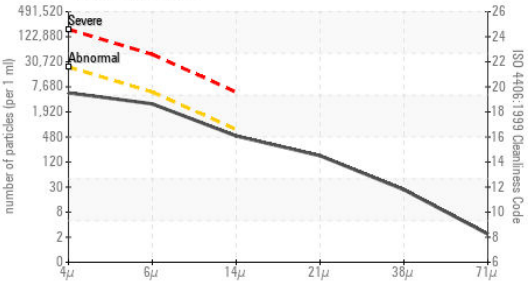
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0808946**	WC0757124	---
Sample Date		Client Info		**18 May 2023**	21 Nov 2022	---
Machine Age	hrs	Client Info		**772**	83	---
Oil Age	hrs	Client Info		**103**	83	---
Filter Age	hrs	Client Info		**103**	83	---
Oil Changed		Client Info		**Changed**	Changed	---
Filter Changed		Client Info		**Changed**	Changed	---
Sample Status				**ATTENTION**	NORMAL	---
Iron	ppm	ASTM D5185m	>51	**18**	13	---
Chromium	ppm	ASTM D5185m	>11	**<1**	<1	---
Nickel	ppm	ASTM D5185m	>5	**4**	0	---
Titanium	ppm	ASTM D5185m		**0**	<1	---
Silver	ppm	ASTM D5185m	>3	**0**	0	---
Aluminum	ppm	ASTM D5185m	>31	**4**	3	---
Lead	ppm	ASTM D5185m	>26	**<1**	2	---
Copper	ppm	ASTM D5185m	>26	**4**	15	---
Tin	ppm	ASTM D5185m	>4	**1**	1	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Silicon	ppm	ASTM D5185m	>22	**8**	8	---
Potassium	ppm	ASTM D5185m	>20	**10**	4	---
Fuel	%	ASTM D3524	>2.1	**<1.0**	0.3	---
Water		WC Method	>0.21	**NEG**	NEG	---
Glycol	%	*ASTM D2982		**NEG**	NEG	---
Soot %	%	*ASTM D7844	>3	**0.2**	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	**7.4**	6.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.8**	21.6	---
Particles >4µm		ASTM D7647	>20000	**4802**	1914	---
Particles >6µm		ASTM D7647	>5000	**2616**	1043	---
Particles >14µm		ASTM D7647	>640	**445**	177	---
Particles >21µm		ASTM D7647	>160	**150**	60	---
Particles >38µm		ASTM D7647	>40	**23**	9	---
Particles >71µm		ASTM D7647	>10	**2**	1	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**19/19/16**	18/17/15	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.21	**NEG**	NEG	---
Sodium	ppm	ASTM D5185m	>31	▲ **79**	5	---
Boron	ppm	ASTM D5185m		**62**	275	---
Barium	ppm	ASTM D5185m		**0**	2	---
Molybdenum	ppm	ASTM D5185m		**83**	238	---
Manganese	ppm	ASTM D5185m		**1**	1	---
Magnesium	ppm	ASTM D5185m		**577**	779	---
Calcium	ppm	ASTM D5185m		**1622**	1392	---
Phosphorus	ppm	ASTM D5185m		**784**	892	---
Zinc	ppm	ASTM D5185m		**995**	1040	---
Sulfur	ppm	ASTM D5185m		**3173**	3505	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.8**	16.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	**9.9**	10.7	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **11.9**	9.8	---

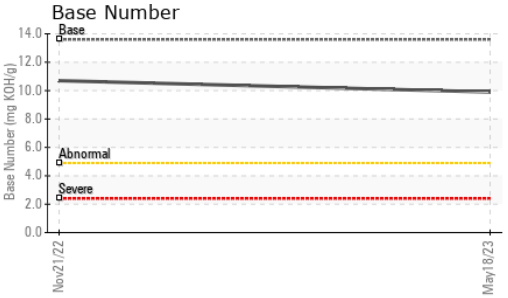
Viscosity @ 100°C



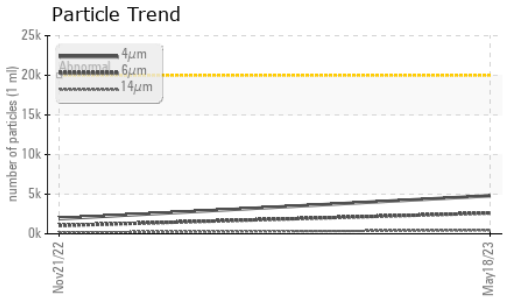
Particle Count



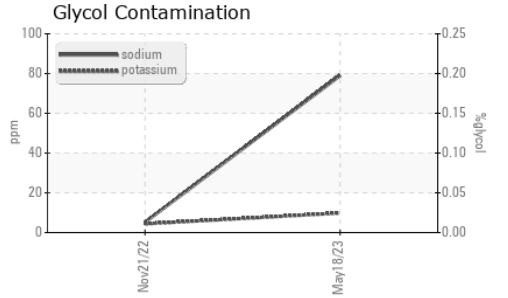
Base Number



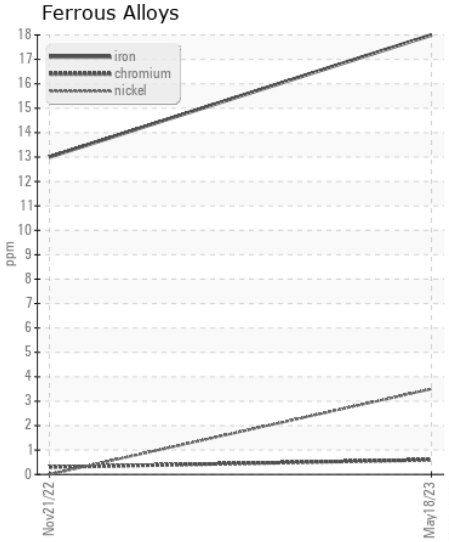
Particle Trend



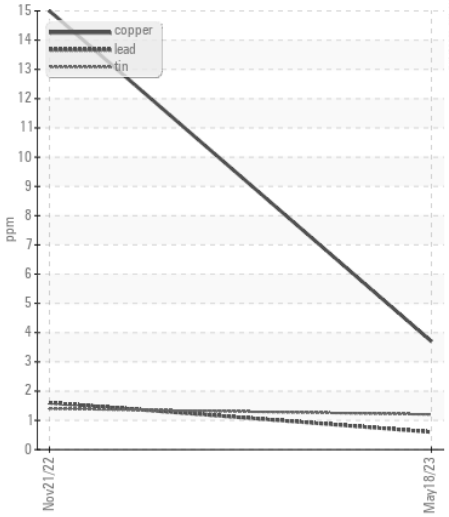
Glycol Contamination



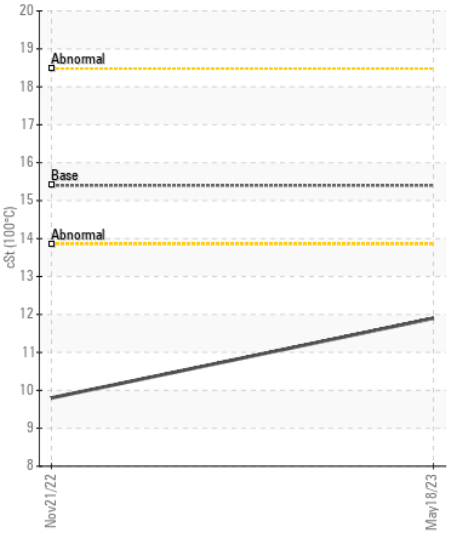
Ferrous Alloys



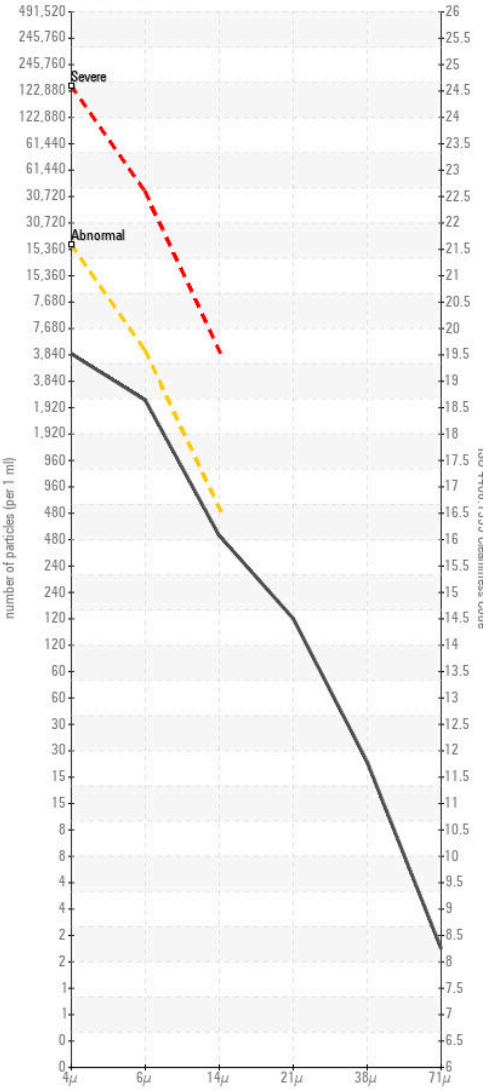
Non-ferrous Metals



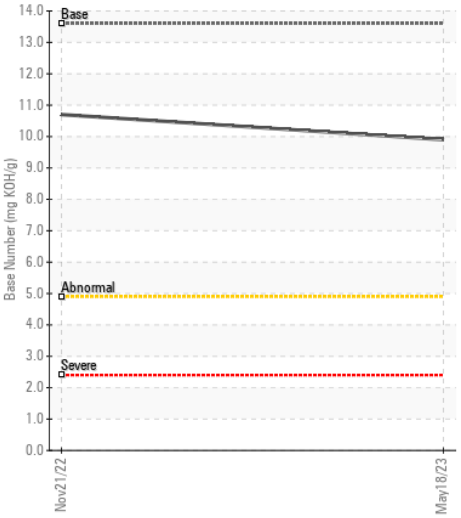
Viscosity @ 100°C



Particle Count



Base Number



Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: WC0808946	**Recieved**	: 22 May 2023
Lab Number	: 05853034	**Diagnosed**	: 24 May 2023
Unique Number	: 10482389	**Diagnostician**	: Jonathan Hester
Test Package	: CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, PrtCount, TBN)		

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)

CAROLINA SUNROCK
PO BOX 25
BUTNER, NC
US 27509
Contact: Leigh Dennis
rdennis@thesunrockgroup.com
T: (919)575-4505
F: (919)575-0162