



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**JOHN DEERE 310K BACKHOE 30103 (S/N 221325)**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON 15W40 (14 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0905203</b>	WC0846471	WC0671555
Sample Date		Client Info		<b>06 May 2024</b>	18 Oct 2023	12 May 2022
Machine Age	hrs	Client Info		<b>4763</b>	4338	4261
Oil Age	hrs	Client Info		<b>750</b>	250	272
Filter Age	hrs	Client Info		<b>750</b>	250	272
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>15</b>	19	18
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>3</b>	3	4
Lead	ppm	ASTM D5185m	>26	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>26	<b>3</b>	2	2
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

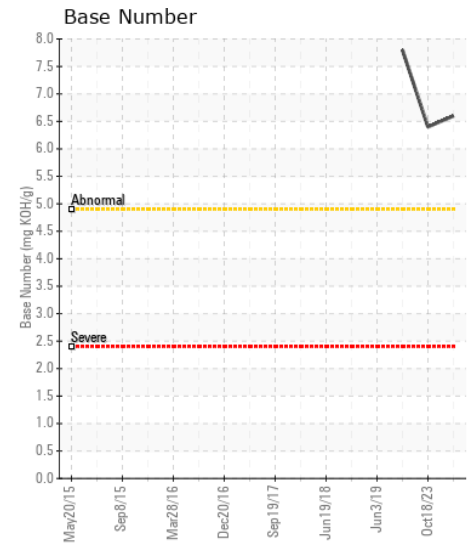
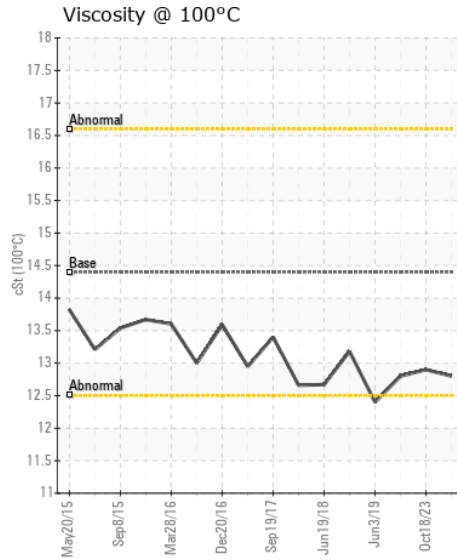
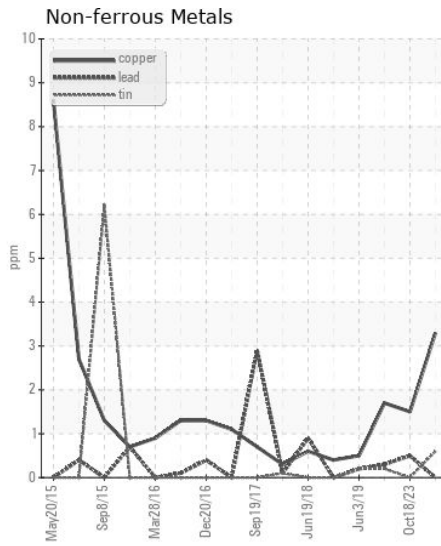
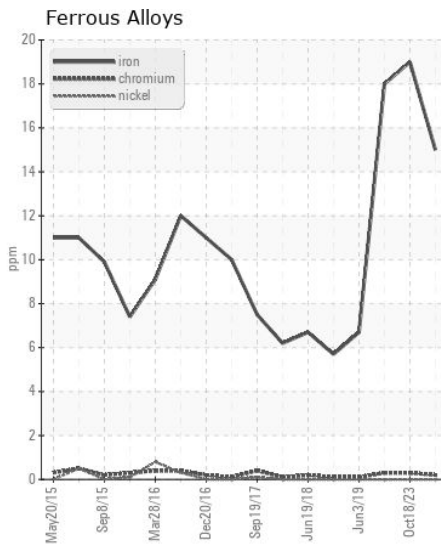
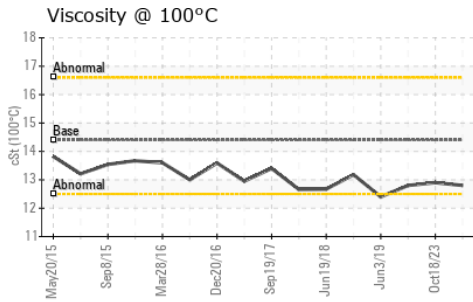
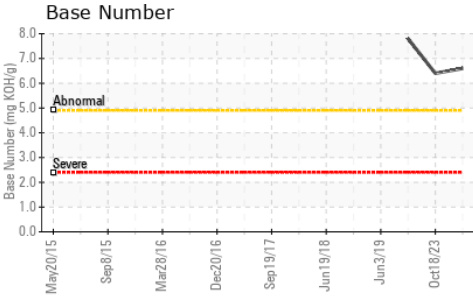
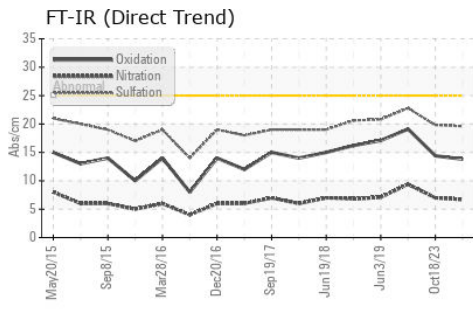
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	1
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	7.0	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	19.8	22.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>50	<b>2</b>	<1	2
Boron	ppm	ASTM D5185m		<b>399</b>	354	333
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>88</b>	94	118
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>414</b>	425	562
Calcium	ppm	ASTM D5185m		<b>1359</b>	1444	1429
Phosphorus	ppm	ASTM D5185m		<b>1023</b>	1029	739
Zinc	ppm	ASTM D5185m		<b>1187</b>	1280	931
Sulfur	ppm	ASTM D5185m		<b>3613</b>	3372	2193
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.8</b>	14.4	19.1
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.6</b>	6.4	7.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.8</b>	12.9	12.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0905203 **Received** : 13 May 2024  
**Lab Number** : 06176761 **Tested** : 14 May 2024  
**Unique Number** : 11022814 **Diagnosed** : 14 May 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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)