



# OIL ANALYSIS REPORT

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

Machine Id  
**JOHN DEERE GOODWIN PUMP 58-0222 (S/N 543071)**

Component  
**Diesel Engine**

Fluid  
**CASTROL 15W40 (12 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PCA0100963</b>	PCA0091945	PCA0068817
Sample Date		Client Info		<b>24 Jan 2024</b>	08 Jun 2023	23 Mar 2022
Machine Age	hrs	Client Info		<b>1878</b>	1863	1848
Oil Age	hrs	Client Info		<b>15</b>	200	813
Filter Age	hrs	Client Info		<b>15</b>	200	813
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	SEVERE

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>44</b>	39	▲ 290
Chromium	ppm	ASTM D5185m	>11	<b>0</b>	<1	4
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	4	12
Lead	ppm	ASTM D5185m	>26	<b>5</b>	22	▲ 406
Copper	ppm	ASTM D5185m	>26	<b>3</b>	2	10
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

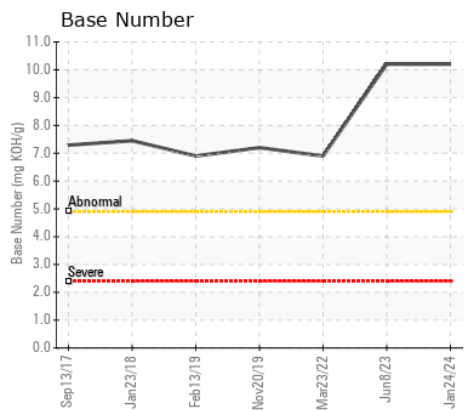
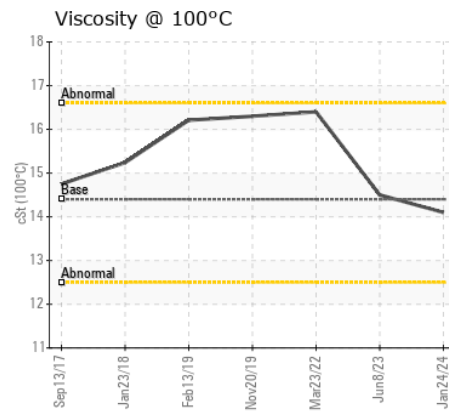
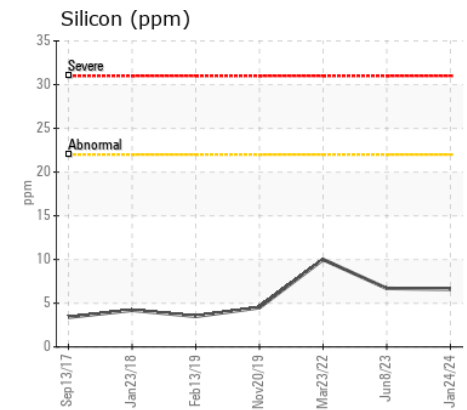
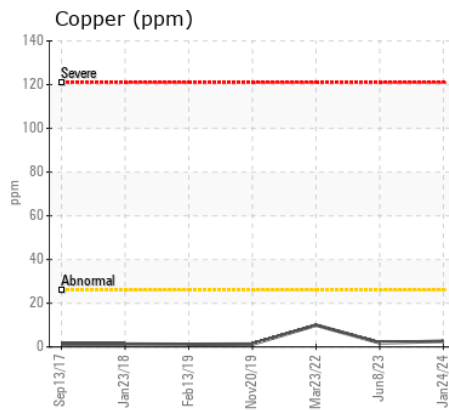
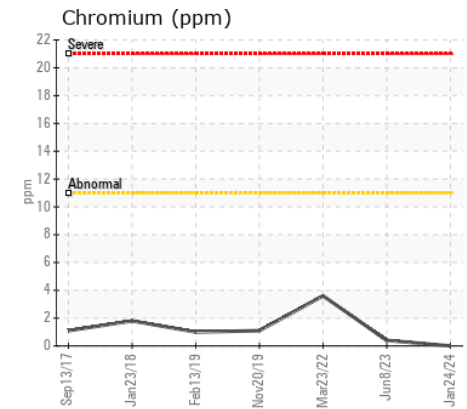
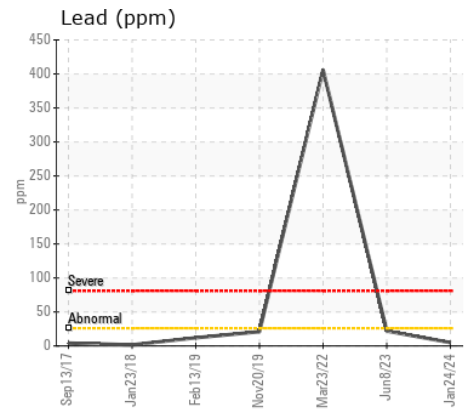
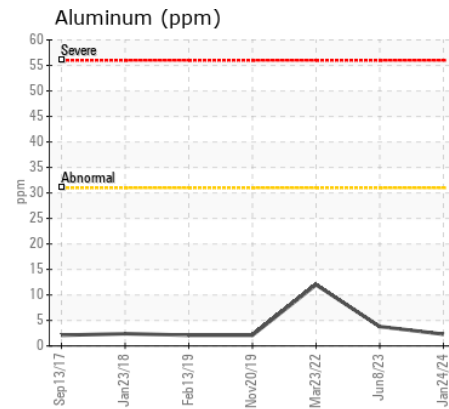
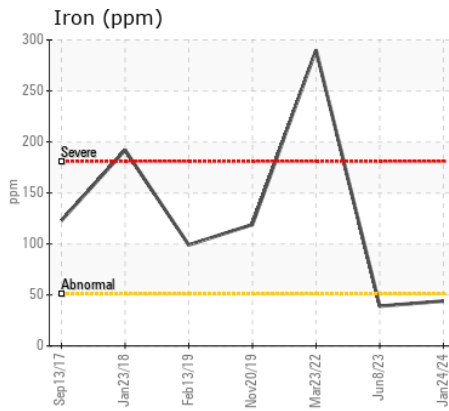
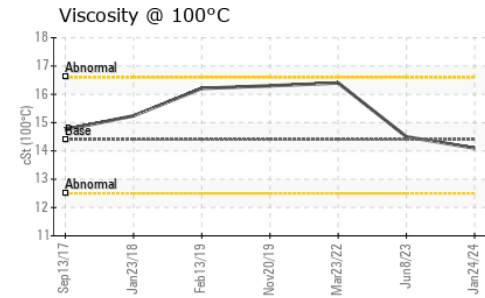
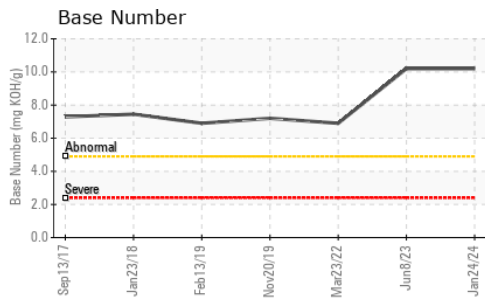
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	<b>7</b>	7	10
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	3
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>0.1</b>	0.1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.8</b>	7.1	16.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.6</b>	20.2	33.4
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	>406	<b>2</b>	1	2
Boron	ppm	ASTM D5185m		<b>143</b>	266	68
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>72</b>	164	75
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>1202</b>	839	247
Calcium	ppm	ASTM D5185m		<b>1072</b>	1467	2451
Phosphorus	ppm	ASTM D5185m		<b>1180</b>	1023	1120
Zinc	ppm	ASTM D5185m		<b>1410</b>	1237	1393
Sulfur	ppm	ASTM D5185m		<b>3909</b>	4179	2822
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.6</b>	15.7	36.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.2</b>	10.2	6.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.1</b>	14.5	16.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0100963 **Received** : 26 Feb 2024  
**Lab Number** : 06099865 **Tested** : 28 Feb 2024  
**Unique Number** : 10898095 **Diagnosed** : 28 Feb 2024 - Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

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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