



# OIL ANALYSIS REPORT

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

Machine Id  
**JOHN DEERE 8310R**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0741956</b>	WC0741950	WC0668713
Sample Date		Client Info		<b>01 Feb 2024</b>	22 Dec 2022	01 Feb 2022
Machine Age	hrs	Client Info		<b>4218</b>	3897	3739
Oil Age	hrs	Client Info		<b>321</b>	158	260
Filter Age	hrs	Client Info		<b>321</b>	158	260
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

## WEAR

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

PQ		ASTM D8184*	>50	<b>1</b>	8	▲ 129
Iron	ppm	ASTM D5185(m)	>51	▲ <b>97</b>	61	▲ 153
Chromium	ppm	ASTM D5185(m)	>11	<b>2</b>	1	2
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>31	<b>3</b>	2	3
Lead	ppm	ASTM D5185(m)	>26	<b>1</b>	<1	1
Copper	ppm	ASTM D5185(m)	>26	<b>3</b>	2	2
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

There is no indication of any contamination in the oil.

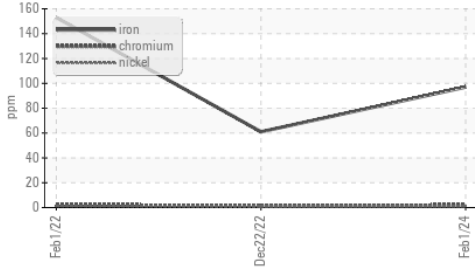
Silicon	ppm	ASTM D5185(m)	>22	<b>5</b>	4	7
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	3	▲ 7
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	▲ 0.045
Soot %	%	ASTM D7844*	>3	<b>0.5</b>	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.2</b>	7.2	7.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.9</b>	19.8	20.1
Emulsified Water	scalar	Visual*	>0.21	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

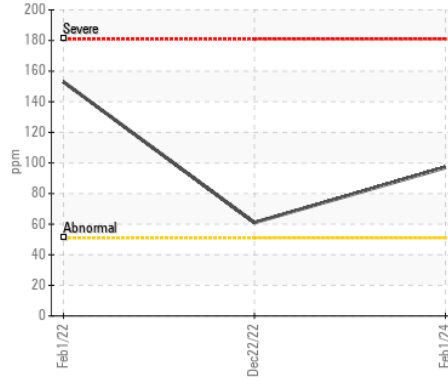
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)	>31	<b>21</b>	8	● 52
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	2	8
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>68</b>	63	66
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185(m)	1010	<b>1028</b>	982	1037
Calcium	ppm	ASTM D5185(m)	1070	<b>1115</b>	1114	1087
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1023</b>	1106	1071
Zinc	ppm	ASTM D5185(m)	1270	<b>1221</b>	1220	1271
Sulfur	ppm	ASTM D5185(m)	2060	<b>2547</b>	2699	2645
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.5</b>	14.4	14.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>14.3</b>	14.7	14.1

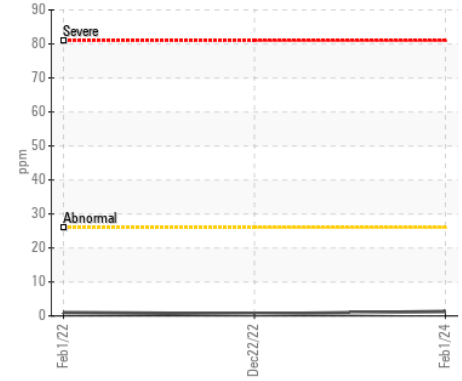
▲ Ferrous Alloys



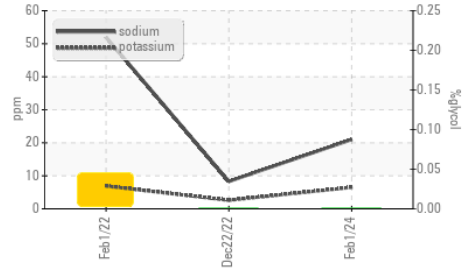
▲ Iron (ppm)



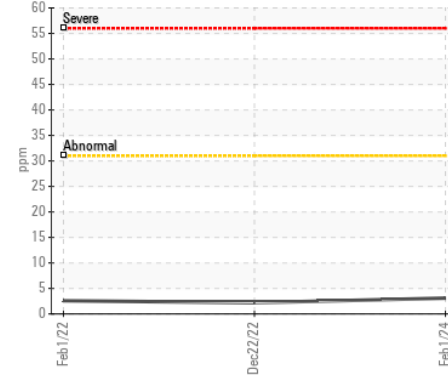
Lead (ppm)



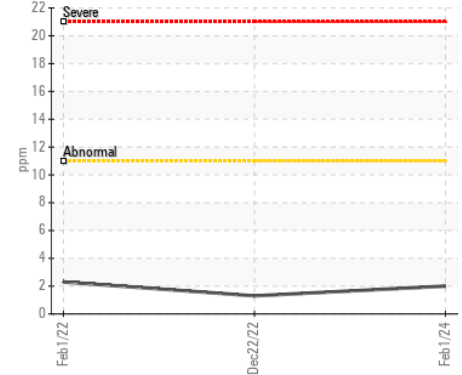
Glycol Contamination



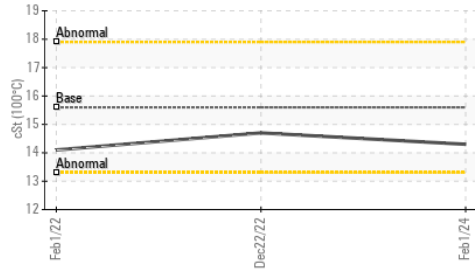
Aluminum (ppm)



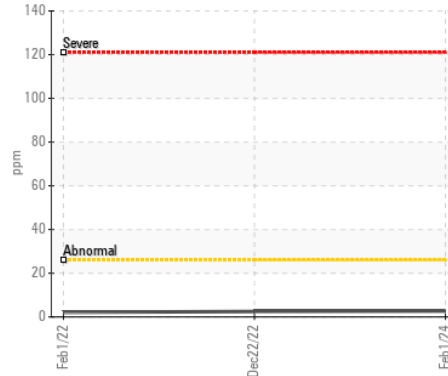
Chromium (ppm)



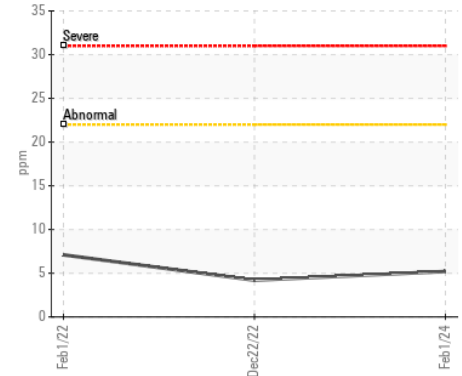
Viscosity @ 100°C



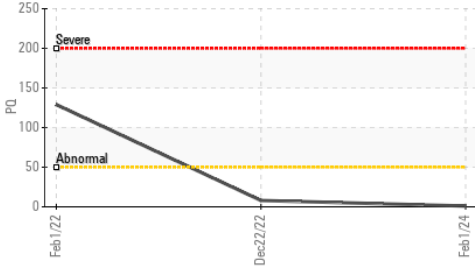
Copper (ppm)



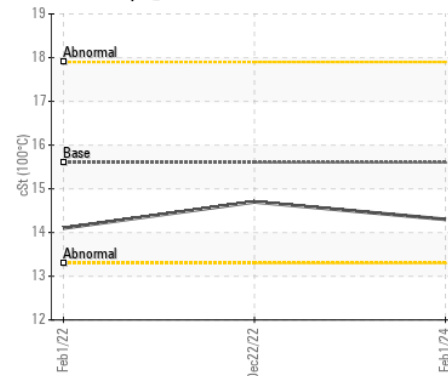
Silicon (ppm)



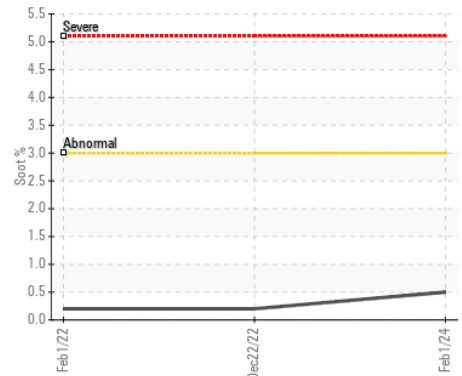
PQ



Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0741956 **Received** : 08 Mar 2024  
**Lab Number** : 02620773 **Tested** : 08 Mar 2024  
**Unique Number** : 5737883 **Diagnosed** : 11 Mar 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol, PQ )

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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.