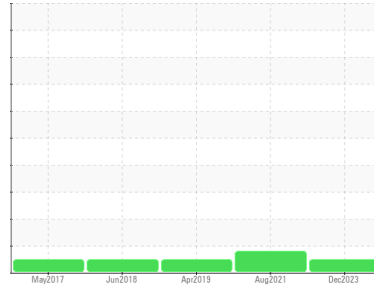


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**JOHN DEERE 610-57**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (3 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0106873</b>	PCA0042158	LWI-601610
Sample Date	Client Info			<b>06 Dec 2023</b>	12 Aug 2021	17 Apr 2019
Machine Age	hrs	Client Info		<b>3296</b>	2850	2656
Oil Age	hrs	Client Info		<b>500</b>	500	250
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>4.0		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.1		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

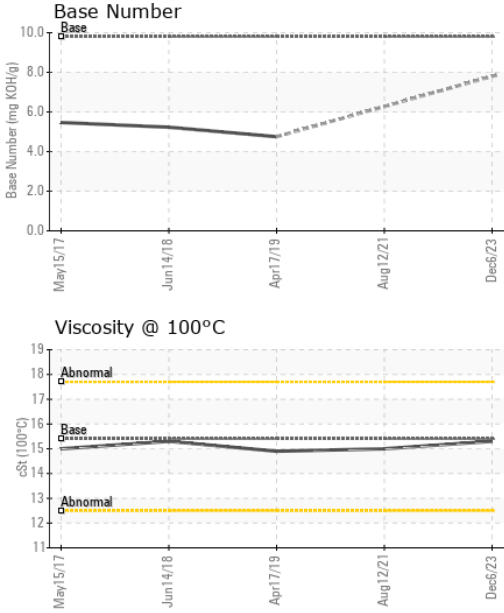
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	<b>76</b>	▲ 101	48
Chromium	ppm	ASTM D5185m	>6	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	4	3
Lead	ppm	ASTM D5185m	>95	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m	>85	<b>4</b>	4	2
Tin	ppm	ASTM D5185m	>9	<b>0</b>	2	0
Antimony	ppm	ASTM D5185m		<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>1</b>	6	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>62</b>	58	72
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>1078</b>	995	1098
Calcium	ppm	ASTM D5185m	1070	<b>1223</b>	1180	1304
Phosphorus	ppm	ASTM D5185m	1150	<b>1048</b>	1017	1178
Zinc	ppm	ASTM D5185m	1270	<b>1342</b>	1180	1403
Sulfur	ppm	ASTM D5185m	2060	<b>2725</b>	2504	---
Lithium	ppm	ASTM D5185m		<b>---</b>	---	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>8</b>	9	10
Sodium	ppm	ASTM D5185m		<b>2</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	8	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		<b>1.2</b>	0.6	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.3</b>	11.4	12
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.4</b>	22	---

# OIL ANALYSIS REPORT

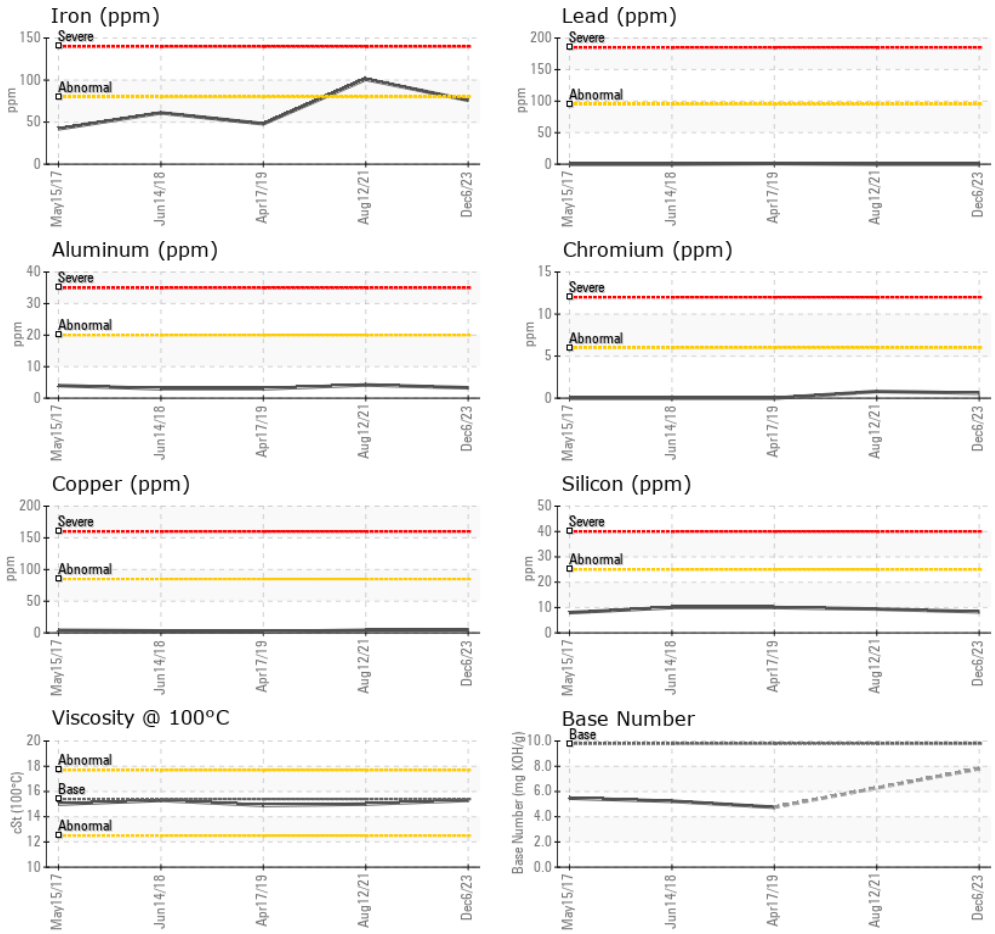


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	*ASTM D7414	>25	<b>22.2</b>	19.2	16
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.8</b>	---	4.75

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	---
Free Water	scalar	*Visual		<b>NEG</b>	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>15.3</b>	15.0	14.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0106873 **Received** : 27 Dec 2023  
**Lab Number** : 06046021 **Diagnosed** : 28 Dec 2023  
**Unique Number** : 10806629 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**GE MARSHALL EXCAVATION**  
 1351 JOLIET RD  
 VALPARAISO, IN  
 US 46385  
 Contact: MARK STEFFEL  
 mark.steffel@gemarshall.com

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)

T:  
F: