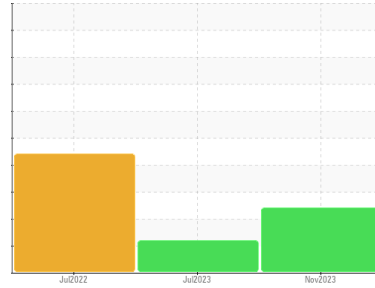


Area  
**G.LOPES CONSTRUCTION INC./ON-ROAD**  
 Machine Id  
**PU248**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of fuel present in the oil.

### Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0109770</b>	PCA0098470	PCA0066501
Sample Date	Client Info		<b>15 Nov 2023</b>	19 Jul 2023	05 Jul 2022
Machine Age	hrs	Client Info	<b>139155</b>	133738	117500
Oil Age	hrs	Client Info	<b>139155</b>	133738	117500
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>SEVERE</b>	ABNORMAL	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<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 >100	<b>23</b>	22	▲ 162
Chromium	ppm	ASTM D5185m >20	<b>2</b>	2	5
Nickel	ppm	ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>5</b>	5	12
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	2	10
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>21</b>	23	31
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	2	0
Molybdenum	ppm	ASTM D5185m 60	<b>77</b>	85	0
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m 1010	<b>32</b>	126	524
Calcium	ppm	ASTM D5185m 1070	<b>1797</b>	2022	1113
Phosphorus	ppm	ASTM D5185m 1150	<b>834</b>	969	883
Zinc	ppm	ASTM D5185m 1270	<b>998</b>	1136	994
Sulfur	ppm	ASTM D5185m 2060	<b>3319</b>	3597	3462

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	6	13
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	3
Potassium	ppm	ASTM D5185m >20	<b>3</b>	2	6
Fuel	%	ASTM D3524 >5	🔴 <b>13.9</b>	▲ 7.0	🔴 13.1

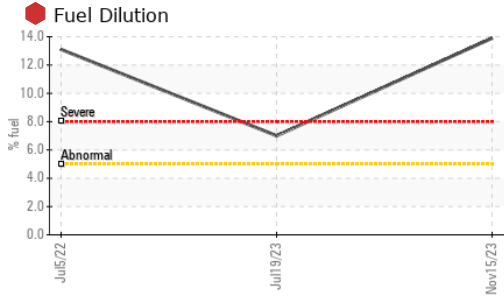
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>13.6</b>	12.5	16.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>25.2</b>	23.9	27.2

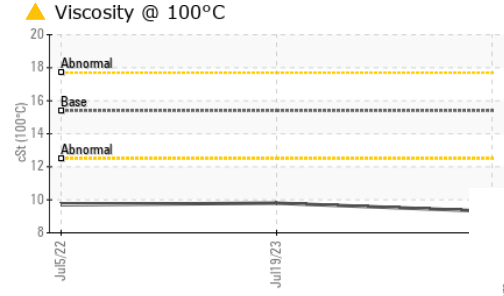
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>25.5</b>	22.8	24.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.86</b>	5.97	▲ 3.65

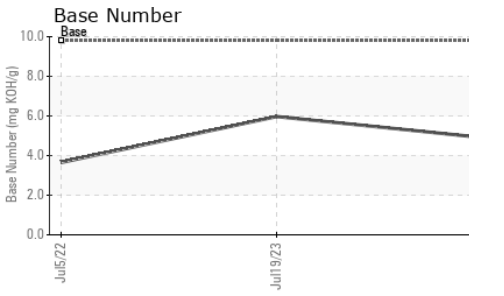
# OIL ANALYSIS REPORT



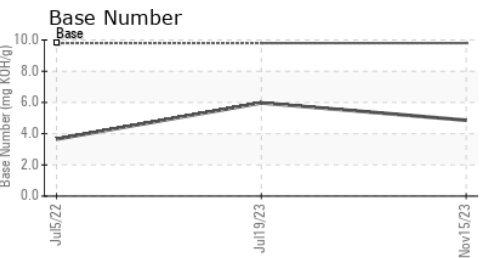
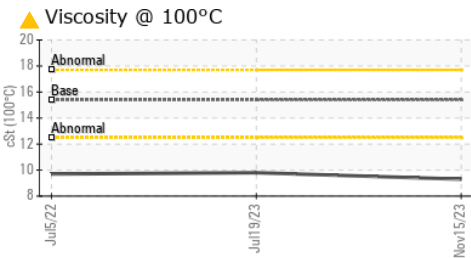
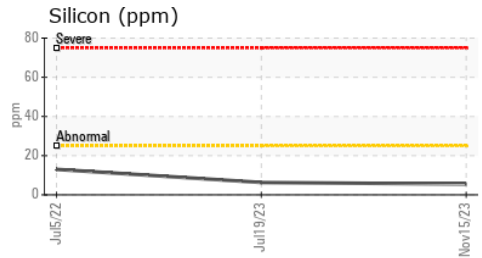
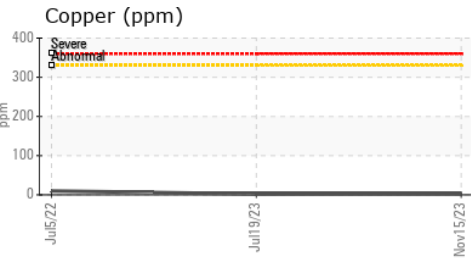
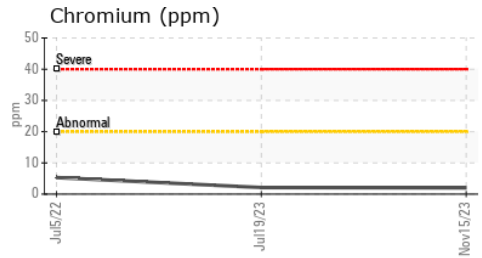
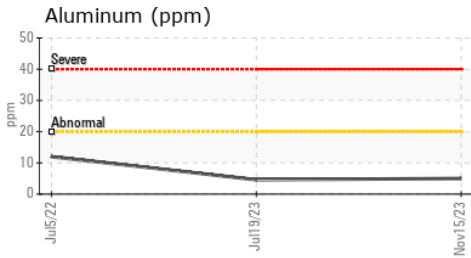
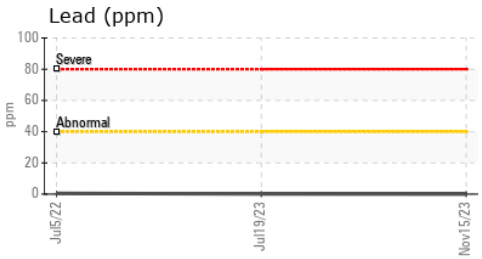
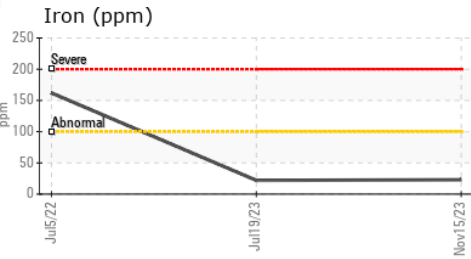
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 9.3	▲ 9.8



## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109770 **Received** : 17 Nov 2023  
**Lab Number** : 06011101 **Diagnosed** : 21 Nov 2023  
**Unique Number** : 10750245 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: PercentFuel )

**G LOPES CONSTRUCTION**  
 565 WINTHROP ST  
 TAUNTON, MA  
 US 02780  
 Contact: BUTCH MCGRATH  
 bmcgrath@glopes.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)

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F: