

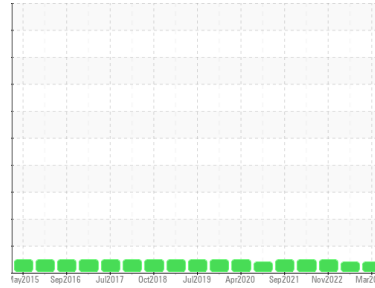
# OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Area  
**G.LOPES CONSTRUCTION INC./Off-Road**  
 Machine Id  
**L636**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0109942</b>	PCA0098463	PCA0083194
Sample Date	Client Info		<b>22 Mar 2024</b>	26 Jul 2023	15 Nov 2022
Machine Age	mls	Client Info	<b>11576</b>	11576	11213
Oil Age	mls	Client Info	<b>10148</b>	10511	10462
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ATTENTION</b>	ATTENTION	NORMAL

## 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>6</b>	9	8
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>8</b>	5	11
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>62</b>	61	60
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>965</b>	996	928
Calcium	ppm	ASTM D5185m 1070	<b>1107</b>	1103	1101
Phosphorus	ppm	ASTM D5185m 1150	<b>1134</b>	1038	1024
Zinc	ppm	ASTM D5185m 1270	<b>1279</b>	1235	1271
Sulfur	ppm	ASTM D5185m 2060	<b>3708</b>	3684	3602

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>3</b>	2	2
Sodium	ppm	ASTM D5185m	<b>3</b>	1	<1
Potassium	ppm	ASTM D5185m >20	<b>1</b>	0	0
Fuel	%	ASTM D3524 >5	<b>&lt;1.0</b>	0.7	<1.0

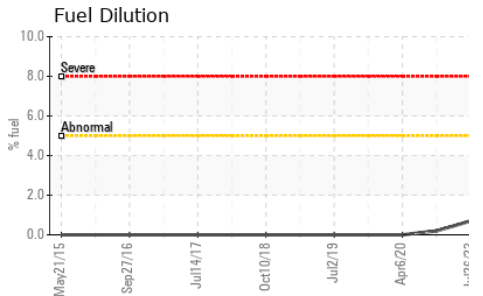
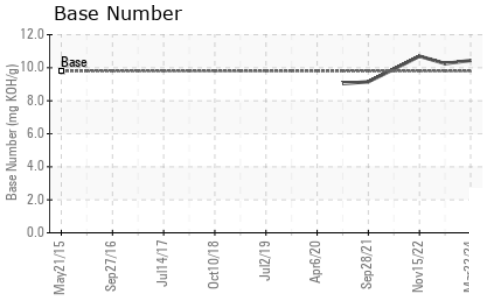
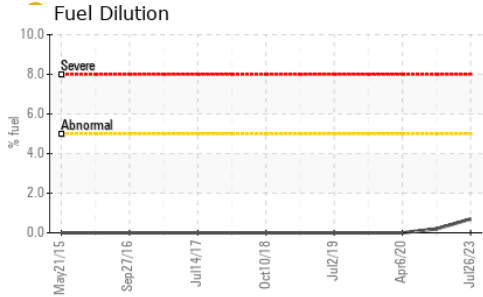
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.5</b>	6.5	7.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.6</b>	18.3	20.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.1</b>	13.9	14.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>10.44</b>	10.25	10.7

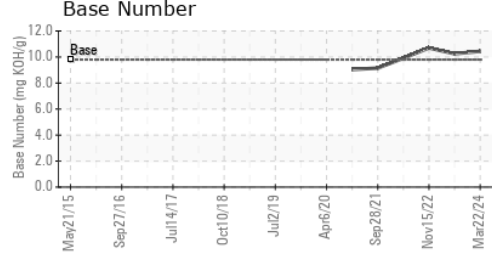
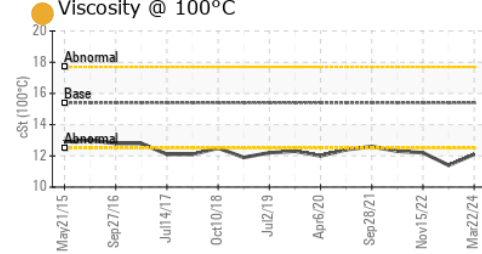
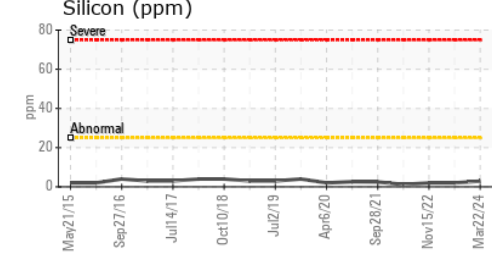
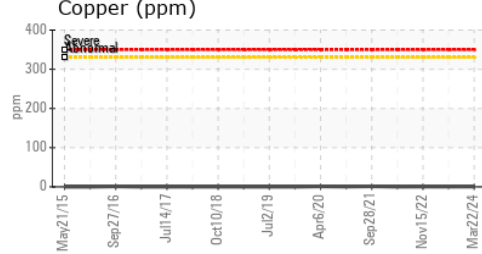
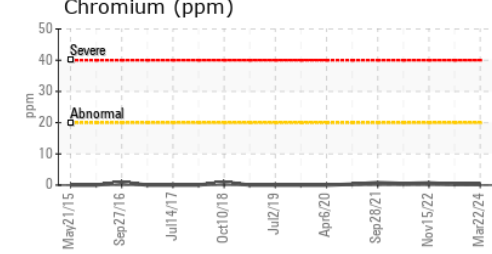
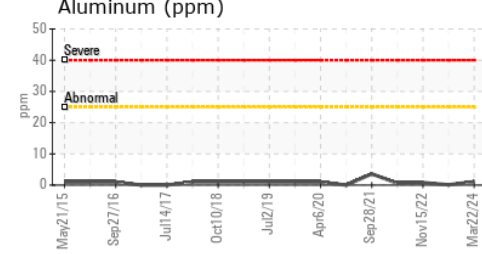
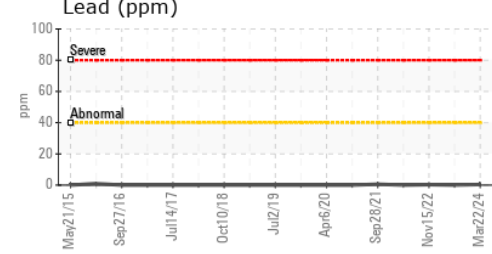
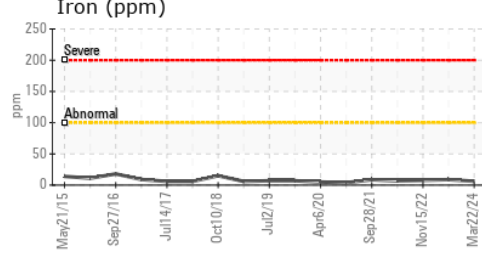
# OIL ANALYSIS REPORT



PARAMETER	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	12.1	11.4

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109942 **Received** : 26 Mar 2024  
**Lab Number** : **06129560** **Tested** : 27 Mar 2024  
**Unique Number** : 10943711 **Diagnosed** : 29 Mar 2024 - Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution )

**G LOPES CONSTRUCTION**  
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 bmcgrath@glopes.com  
 T:  
 F:

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)