

Area  
**G. LOPES CONSTRUCTION INC./OFF-ROAD**

Machine Id  
**L-63**  
Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PCA0109894</b>	PCA0109854	PCA0098337
Sample Date		Client Info		<b>10 Apr 2024</b>	15 Feb 2024	14 Feb 2024
Machine Age	hrs	Client Info		<b>2673</b>	1924	1924
Oil Age	hrs	Client Info		<b>2673</b>	1924	1924
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>12</b>	12	16
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>2</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>3</b>	5	6
Tin	ppm	ASTM D5185m	>15	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

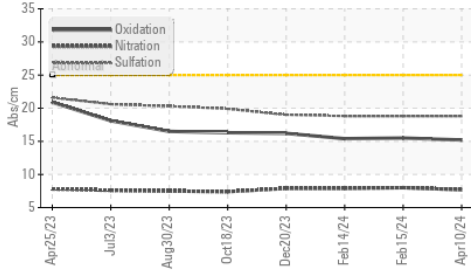
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	8.0	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	18.8	18.8
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	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

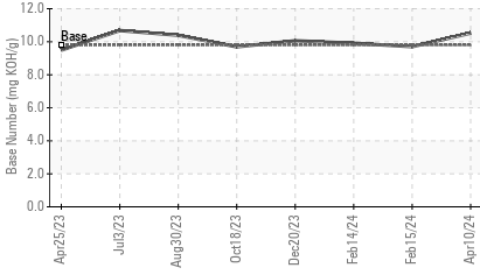
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Boron	ppm	ASTM D5185m	0	<b>2</b>	2	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	10	10
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	59	75
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	1010	<b>1034</b>	930	1196
Calcium	ppm	ASTM D5185m	1070	<b>1231</b>	1057	1318
Phosphorus	ppm	ASTM D5185m	1150	<b>1182</b>	1072	1365
Zinc	ppm	ASTM D5185m	1270	<b>1413</b>	1199	1558
Sulfur	ppm	ASTM D5185m	2060	<b>3969</b>	3429	4503
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.2</b>	15.5	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>10.52</b>	9.70	9.91
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.9</b>	12.7	12.8

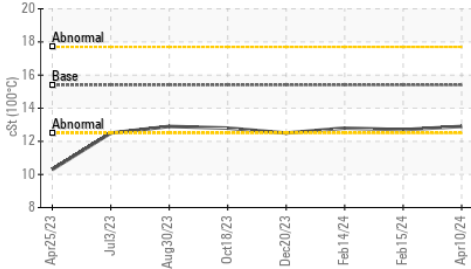
**FT-IR (Direct Trend)**



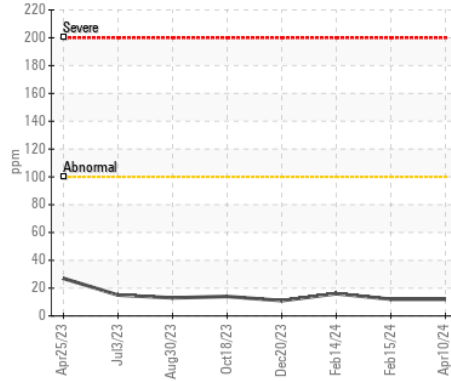
**Base Number**



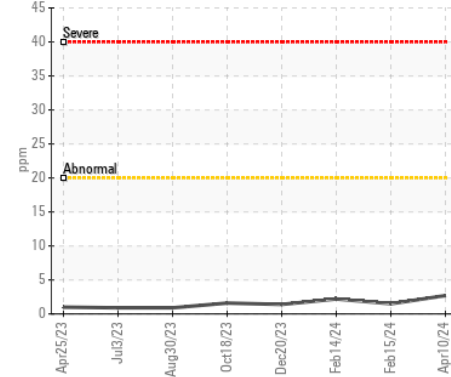
**Viscosity @ 100°C**



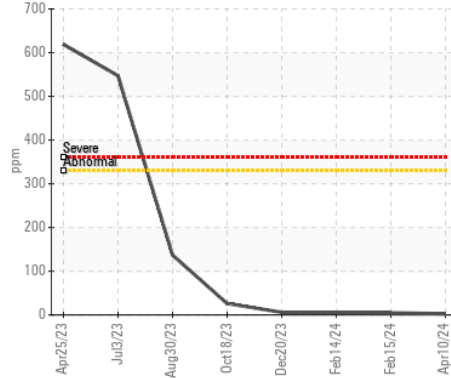
**Iron (ppm)**



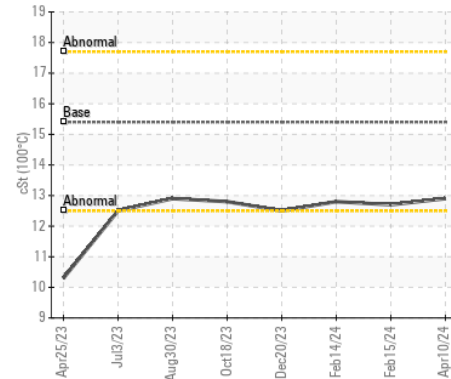
**Aluminum (ppm)**



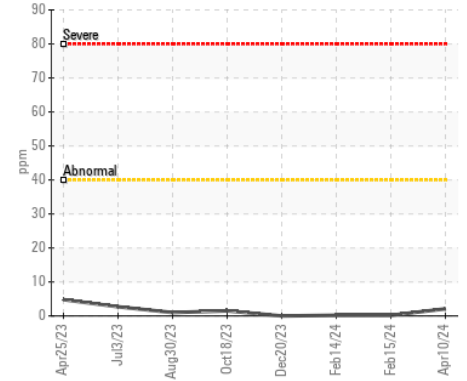
**Copper (ppm)**



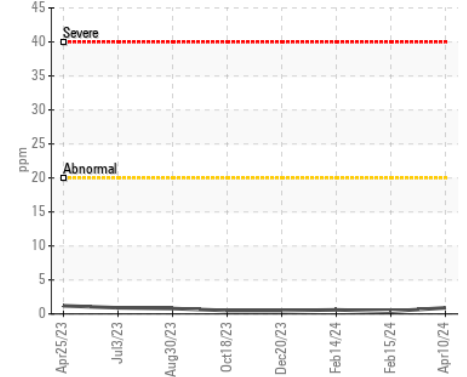
**Viscosity @ 100°C**



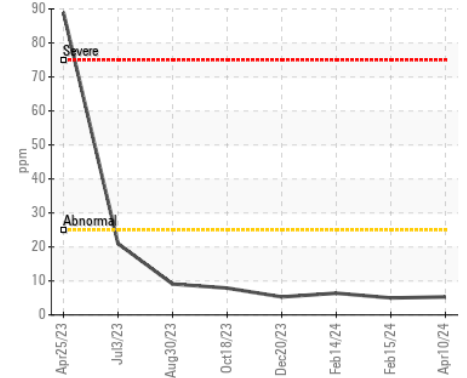
**Lead (ppm)**



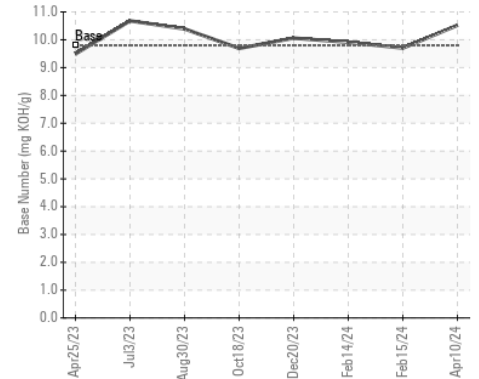
**Chromium (ppm)**



**Silicon (ppm)**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109894  
**Lab Number** : 06147563  
**Unique Number** : 10977641  
**Test Package** : MOB 2

**Received** : 12 Apr 2024  
**Tested** : 15 Apr 2024  
**Diagnosed** : 15 Apr 2024 - Wes Davis

**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: