

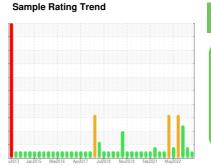
# **OIL ANALYSIS REPORT**

# G.LOPES CONSTRUCTION INC./On-Road

244 Component

**Diesel Engine** 

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





## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the

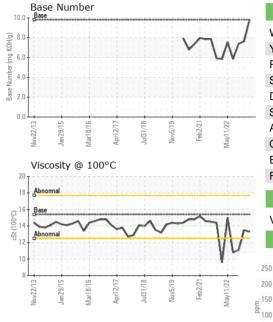
### **Fluid Condition**

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0109780	PCA0098427	PCA0072078
Sample Date		Client Info		07 Nov 2023	19 Jul 2023	22 Mar 2023
Machine Age	mls	Client Info		556000	544000	532000
Oil Age	mls	Client Info		472166	472166	472166
Oil Changed	0	Client Info		N/A	N/A	N/A
Sample Status				NORMAL	MARGINAL	SEVERE
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<b>4.2</b>	15.3
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	14	27	63
Chromium	ppm	ASTM D5185m	>20	<1	1	3
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	2
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	0	<1	1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Caumum	ррпп	710 TWI DOTOOIII		U	U	O
ADDITIVES	ррш	method	limit/base	current	history1	history2
	ppm		limit/base			
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 6	history1	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0	current 6 2	history1 4 2	history2 3 0
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 6 2 56	history1 4 2 64	history2 3 0 52
ADDITIVES  Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 6 2 56 <1	history1 4 2 64 <1	history2 3 0 52 <1
ADDITIVES  Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method  ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current  6 2 56 <1 850	history1  4  2  64  <1  967	history2  3  0  52  <1  789
ADDITIVES  Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	method  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	0 0 60 0 1010 1070	current  6  2  56  <1  850  922	history1  4  2  64  <1  967  1154	history2  3  0 52 <1 789 936 842 1063
ADDITIVES  Boron  Barium  Molybdenum  Manganese  Magnesium  Calcium  Phosphorus  Zinc  Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current  6  2  56  <1  850  922  1001	history1  4 2 64 <1 967 1154 1063 1278 3272	history2  3  0 52 <1 789 936 842 1063 2286
ADDITIVES  Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current  6 2 56 <1 850 922 1001 1190 2780  current	history1  4  2  64  <1  967  1154  1063  1278  3272  history1	history2  3 0 52 <1 789 936 842 1063 2286 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	current  6 2 56 <1 850 922 1001 1190 2780  current 4	history1  4  2  64  <1  967  1154  1063  1278  3272  history1  6	history2  3 0 52 <1 789 936 842 1063 2286 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	method  ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	current  6 2 56 <1 850 922 1001 1190 2780  current 4 <1	history1  4 2 64 <1 967 1154 1063 1278 3272 history1  6 0	history2  3 0 52 <1 789 936 842 1063 2286 history2 9 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	current  6 2 56 <1 850 922 1001 1190 2780  current 4 <1 <1	history1  4  2  64  <1  967  1154  1063  1278  3272  history1  6	history2  3 0 52 <1 789 936 842 1063 2286 history2 9 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	method  ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	current  6 2 56 <1 850 922 1001 1190 2780  current  4 <1 <1 current	history1  4 2 64 <1 967 1154 1063 1278 3272 history1  6 0 <1	history2  3 0 52 <1 789 936 842 1063 2286 history2 9 <1 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185m  method  ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  method	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	current  6 2 56 <1 850 922 1001 1190 2780  current  4 <1 <1 current 0.4	history1  4  2  64  <1  967  1154  1063  1278  3272  history1  6  0  <1  history1  0.4	history2  3  0 52 <1 789 936 842 1063 2286 history2 9 <1 2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	current  6 2 56 <1 850 922 1001 1190 2780  current  4 <1 <1 current	history1  4  2  64  <1  967  1154  1063  1278  3272  history1  6  0  <1  history1  0.4  10.5	history2  3 0 52 <1 789 936 842 1063 2286 history2 9 <1 2 history2 1 14.2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method  ASTM D5185m  method  ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  method	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	current  6 2 56 <1 850 922 1001 1190 2780  current  4 <1 <1 current 0.4	history1  4  2  64  <1  967  1154  1063  1278  3272  history1  6  0  <1  history1  0.4	history2  3  0 52 <1 789 936 842 1063 2286 history2 9 <1 2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m  method ASTM D5185m ASTM D5185m  *ASTM D5185m ASTM D76185m ASTM D76185m ASTM D76185m ASTM D76185m ASTM D76185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 limit/base	current  6 2 56 <1 850 922 1001 1190 2780  current 4 <1 <1 current 0.4 8.5	history1  4  2  64  <1  967  1154  1063  1278  3272  history1  6  0  <1  history1  0.4  10.5	history2  3 0 52 <1 789 936 842 1063 2286 history2 9 <1 2 history2 1 14.2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m  method ASTM D5185m ASTM D5185m  *ASTM D5185m ASTM D76185m ASTM D76185m ASTM D76185m ASTM D76185m ASTM D76185m	0 0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	current  6 2 56 <1 850 922 1001 1190 2780  current  4 <1 <1 current 0.4 8.5 21.0	history1  4 2 64 <1 967 1154 1063 1278 3272 history1  6 0 <1 history1 0.4 10.5 22.7	history2 3 0 52 <1 789 936 842 1063 2286 history2 9 <1 2 history2 1 14.2 28.0

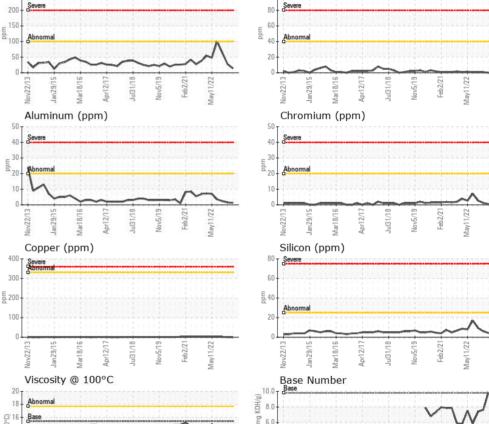


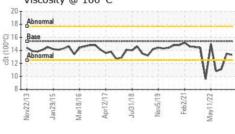
## **OIL ANALYSIS REPORT**

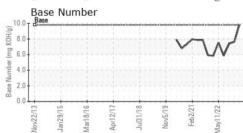


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIFS	method	limit/base	current	history1	historv2

Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.5	▲ 11.1
GRAPHS						
Iron (ppm)	neyzennopasa	13300000000000		Lead (ppm)	11171111111	











Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 2

: 10736830

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0109780 : 06003068

Received Diagnosed Diagnostician

: 09 Nov 2023 : 14 Nov 2023 : Wes Davis

Contact: BUTCH MCGRATH bmcgrath@glopes.com

**G LOPES CONSTRUCTION** 

T: F:

565 WINTHROP ST

TAUNTON, MA

US 02780

\* - 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)