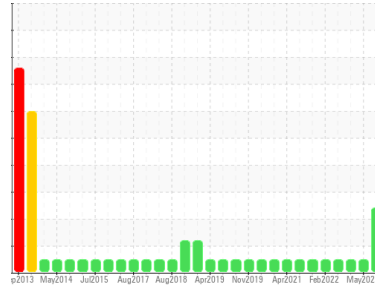


OIL ANALYSIS REPORT



Area
N.E.R./Off-Road
Machine Id
L86
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



GLYCOL



DIAGNOSIS

▲ Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

Sodium and/or potassium levels are high.

▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0098471	PCA0090583	PCA0078236
Sample Date	Client Info		07 Aug 2023	09 May 2023	04 Oct 2022
Machine Age	hrs	Client Info	16427	106810	106810
Oil Age	hrs	Client Info	14458	14458	14458
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	14	9	8
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >2	1	<1	<1
Silver	ppm	ASTM D5185m >2	<1	0	<1
Aluminum	ppm	ASTM D5185m >25	0	1	<1
Lead	ppm	ASTM D5185m >40	9	1	<1
Copper	ppm	ASTM D5185m >330	33	1	3
Tin	ppm	ASTM D5185m >15	1	<1	<1
Vanadium	ppm	ASTM D5185m	0	<1	1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	6	1
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	70	61	59
Manganese	ppm	ASTM D5185m 0	2	<1	1
Magnesium	ppm	ASTM D5185m 1010	819	997	901
Calcium	ppm	ASTM D5185m 1070	905	1146	1006
Phosphorus	ppm	ASTM D5185m 1150	914	1079	1006
Zinc	ppm	ASTM D5185m 1270	1134	1336	1176
Sulfur	ppm	ASTM D5185m 2060	3471	3904	3330

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	4	4
Sodium	ppm	ASTM D5185m	▲ 129	2	3
Potassium	ppm	ASTM D5185m >20	▲ 147	5	1
Glycol	%	*ASTM D2982	NEG	NEG	NEG

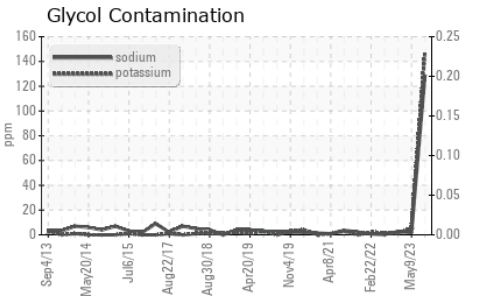
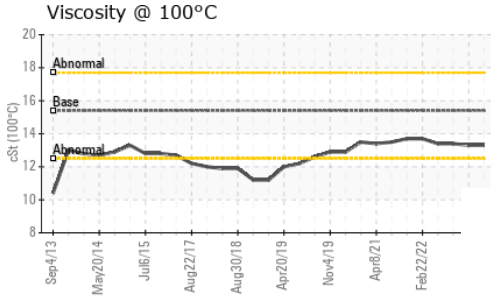
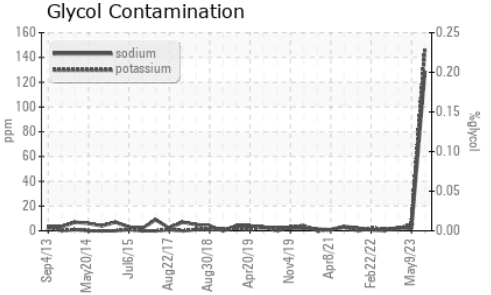
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	8.9	6.8	7.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.9	19.4	20.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.4	15.2	15.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	10.67	9.57	9.36

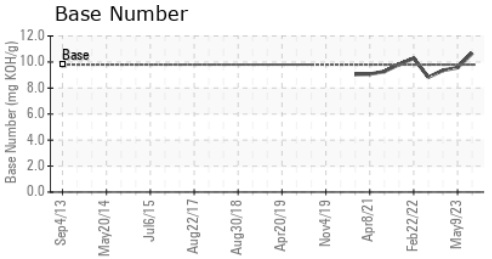
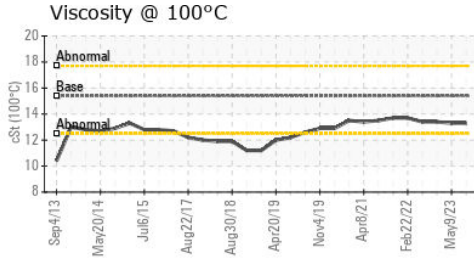
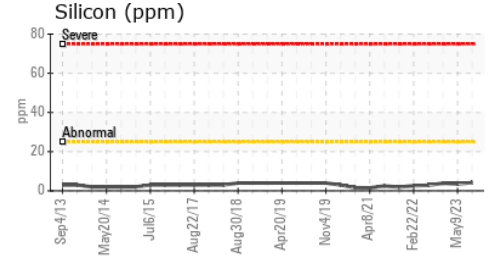
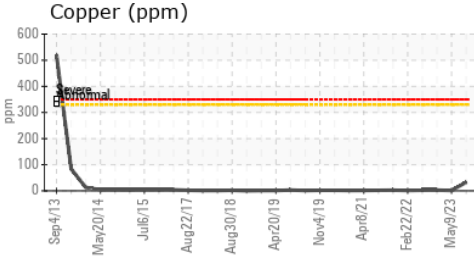
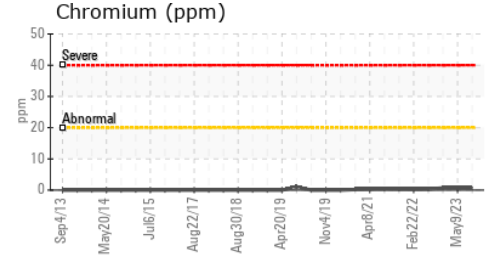
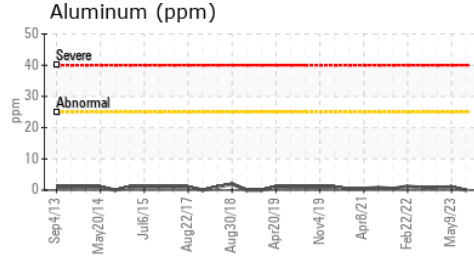
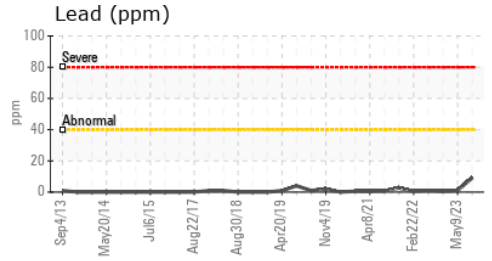
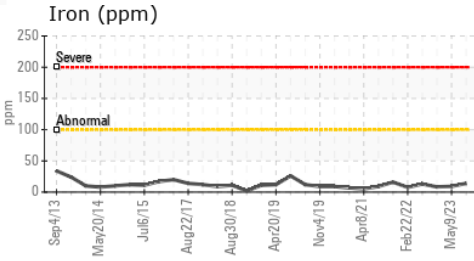
OIL ANALYSIS REPORT



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	13.3	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0098471 **Received** : 10 Aug 2023
Lab Number : **05920797** **Diagnosed** : 11 Aug 2023
Unique Number : 10592711 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: Glycol)

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: