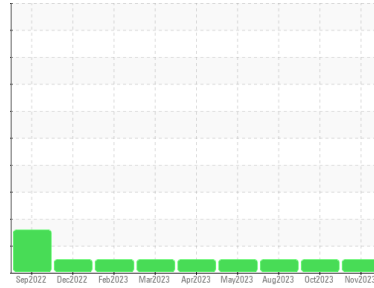




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**712021**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0089544</b>	GFL0097338	GFL0089510
Sample Date	Client Info		<b>09 Nov 2023</b>	31 Oct 2023	24 Aug 2023
Machine Age	hrs	Client Info	<b>2629</b>	2629	2629
Oil Age	hrs	Client Info	<b>2629</b>	2629	588
Oil Changed	Client Info		<b>N/A</b>	N/A	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>22</b>	6	41
Chromium	ppm	ASTM D5185m >20	<b>1</b>	0	2
Nickel	ppm	ASTM D5185m >5	<b>0</b>	1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	<1	3
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>0</b>	0	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>7</b>	7	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m 60	<b>54</b>	55	64
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>935</b>	908	952
Calcium	ppm	ASTM D5185m 1070	<b>1028</b>	1012	1116
Phosphorus	ppm	ASTM D5185m 1150	<b>1022</b>	995	1057
Zinc	ppm	ASTM D5185m 1270	<b>1246</b>	1217	1265
Sulfur	ppm	ASTM D5185m 2060	<b>2973</b>	2855	3175

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	4	8
Sodium	ppm	ASTM D5185m	<b>0</b>	2	0
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	1

## INFRA-RED

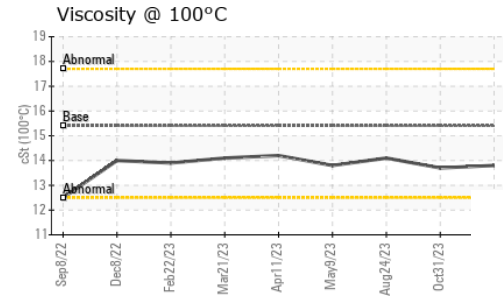
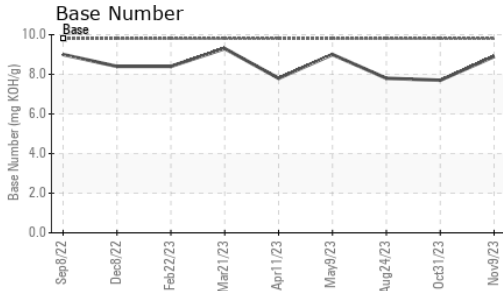
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>1</b>	0.4	1.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.7</b>	8.3	10.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.5</b>	20.8	20.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.5</b>	16.9	16.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.9</b>	7.7	7.8



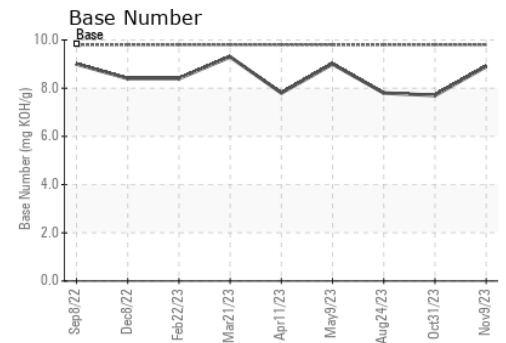
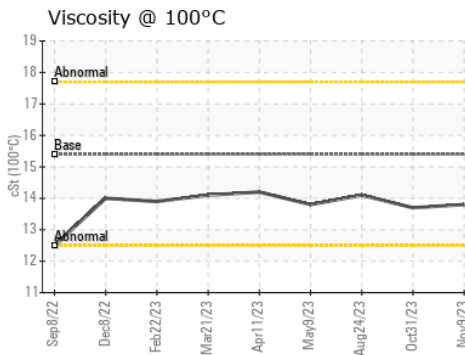
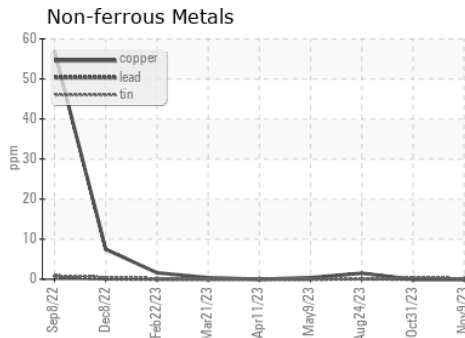
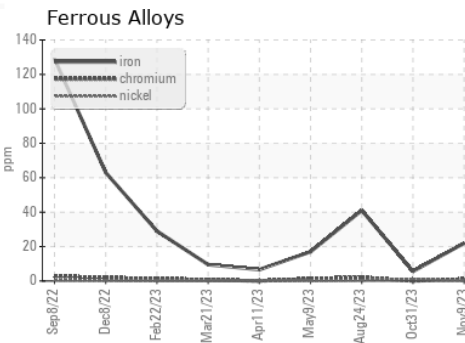
# OIL ANALYSIS REPORT



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	13.8	13.7

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0089544  
 Lab Number : 06006832  
 Unique Number : 10740594  
 Test Package : FLEET

GFL Environmental - 654S - Midlothian  
 12230 Deergrove Road  
 Midlothian, VA  
 US 23112  
 Contact: Corbin Umphlet  
 cumphlet@gflenv.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: