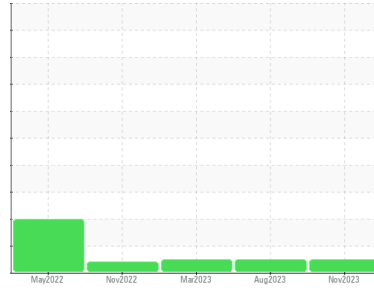




# OIL ANALYSIS REPORT

## Sample Rating Trend

**NORMAL**



Machine Id  
**412011**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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>GFL0023438</b>	GFL0060411	GFL0060401
Sample Date	Client Info		<b>15 Nov 2023</b>	13 Aug 2023	10 Mar 2023
Machine Age	mls	Client Info	<b>68638</b>	56529	37532
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	Changed	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
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 >120	<b>12</b>	8	11
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>1</b>	2	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>6</b>	7	22
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
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>2</b>	<1	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>56</b>	59	51
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>850</b>	933	780
Calcium	ppm	ASTM D5185m 1070	<b>1014</b>	1040	1093
Phosphorus	ppm	ASTM D5185m 1150	<b>970</b>	1016	929
Zinc	ppm	ASTM D5185m 1270	<b>1166</b>	1244	1102
Sulfur	ppm	ASTM D5185m 2060	<b>2863</b>	2996	2455

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	5	6
Sodium	ppm	ASTM D5185m	<b>1</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>6</b>	5	8

## INFRA-RED

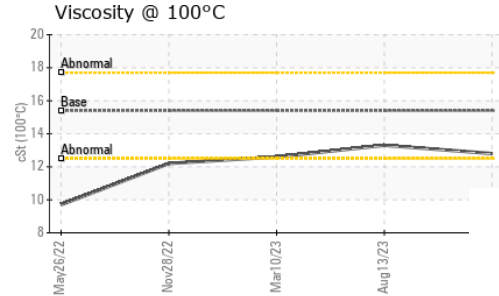
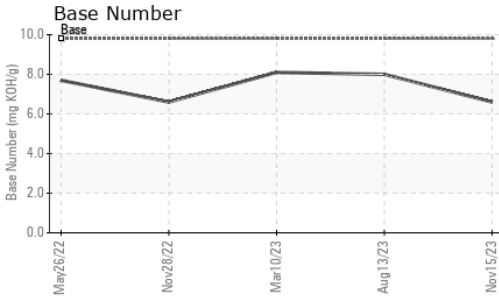
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.4</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.1</b>	7.5	7.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.4</b>	19.2	18.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.7</b>	15.1	13.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.6</b>	8.0	8.1



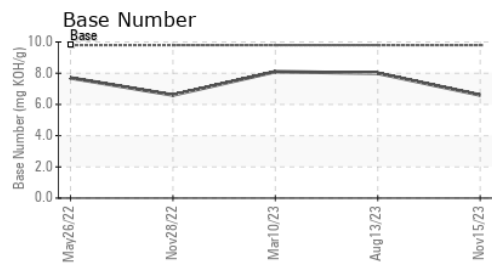
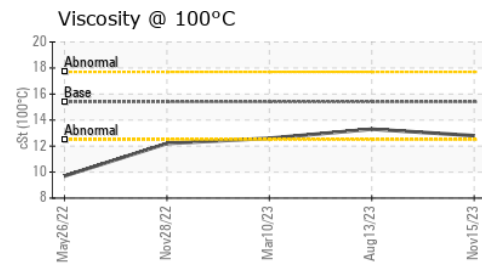
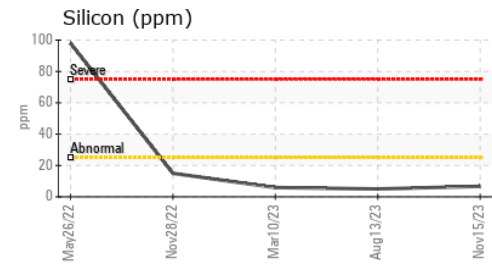
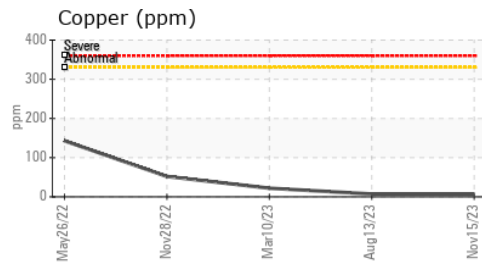
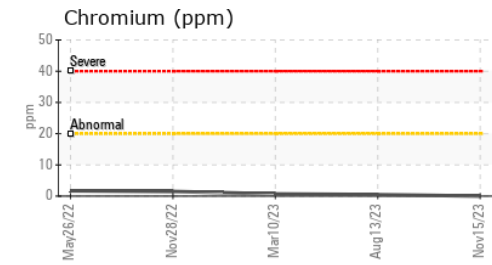
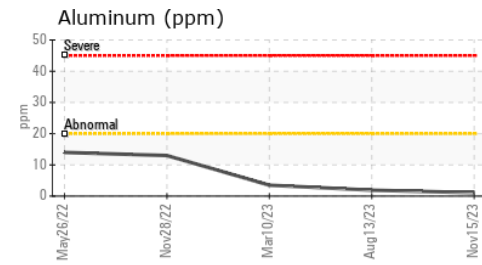
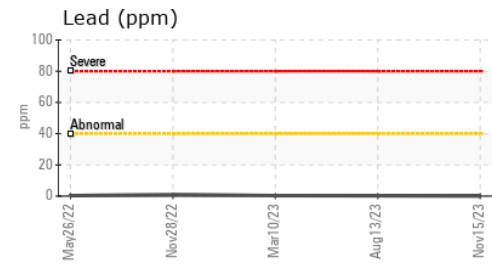
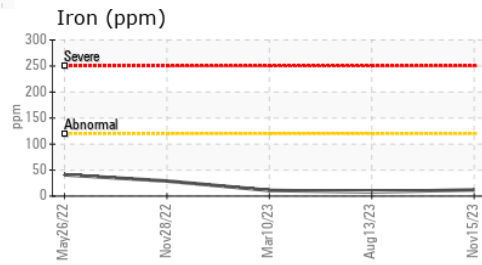
# OIL ANALYSIS REPORT



VISUAL	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	<b>12.8</b>	13.3	12.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0023438 **Recieved** : 13 Dec 2023  
**Lab Number** : 06033322 **Diagnosed** : 14 Dec 2023  
**Unique Number** : 10783113 **Diagnostician** : Wes Davis  
**Test Package** : MOB1+

**GFL Environmental - 660S - Roanoke**  
 2045 LEE HWY  
 Cloverdale, VA  
 US 24077  
 Contact: DELBERT BEASLEY

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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