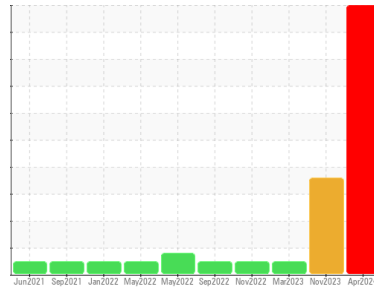




# OIL ANALYSIS REPORT

Machine Id  
**422006**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
 We advise that you check for the source of the coolant leak. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 Test for glycol is positive. There is a high concentration of glycol present in the oil. There is a moderate concentration of dirt present in the oil.

**Fluid Condition**  
 The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>GFL0080092</b>	GFL0095037	GFL0044750
Sample Date	Client Info			<b>30 Apr 2024</b>	15 Nov 2023	24 Mar 2023
Machine Age	hrs	Client Info		<b>28515</b>	28358	27733
Oil Age	hrs	Client Info		<b>600</b>	600	600
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	<b>23</b>	16	27
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	4	<1
Copper	ppm	ASTM D5185(m)	>330	<b>10</b>	6	2
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

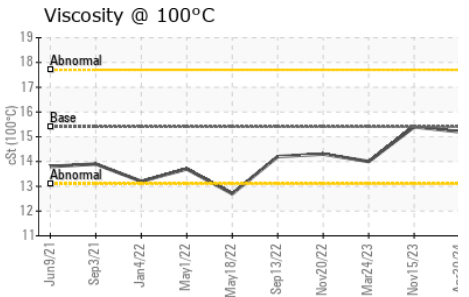
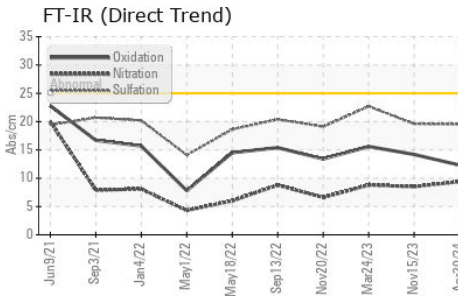
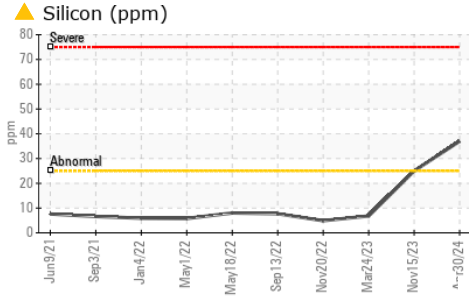
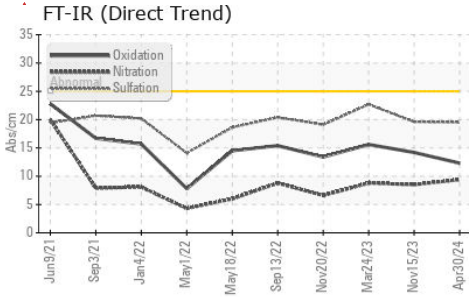
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<b>111</b>	9	3
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>93</b>	51	64
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>866</b>	802	1039
Calcium	ppm	ASTM D5185(m)	1070	<b>950</b>	944	1176
Phosphorus	ppm	ASTM D5185(m)	1150	<b>942</b>	853	1135
Zinc	ppm	ASTM D5185(m)	1270	<b>1094</b>	996	1282
Sulfur	ppm	ASTM D5185(m)	2060	<b>2397</b>	2409	2663
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>▲ 37</b>	25	7
Sodium	ppm	ASTM D5185(m)		<b>● 1344</b>	● 531	14
Potassium	ppm	ASTM D5185(m)	>20	<b>▲ 9</b>	4	<1
Glycol	%	ASTM D7922*		<b>▲ &gt;.70</b>	▲ 0.067	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>0</b>	0.1	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.4</b>	8.5	8.8
Sulfation	Abs.1mm	ASTM D7415*	>30	<b>19.5</b>	19.6	22.7



# OIL ANALYSIS REPORT

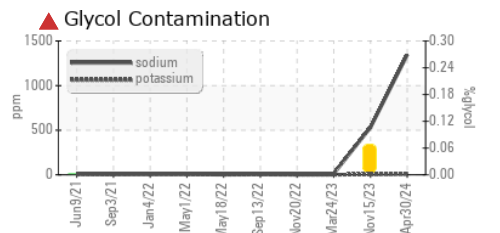
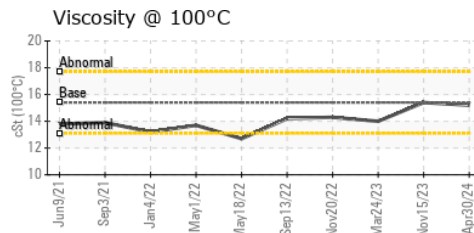
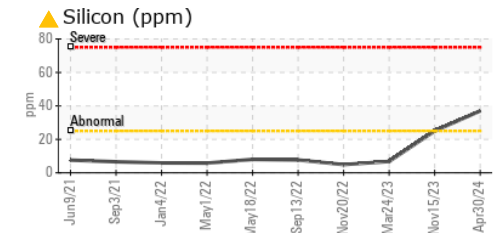
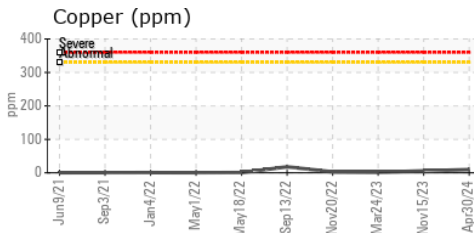
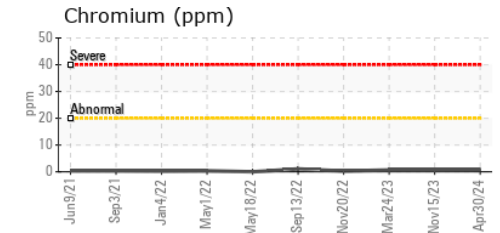
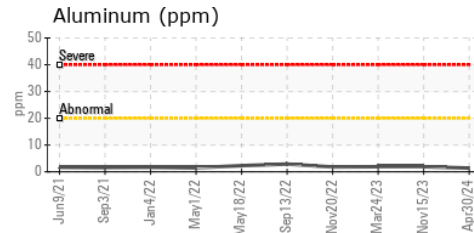
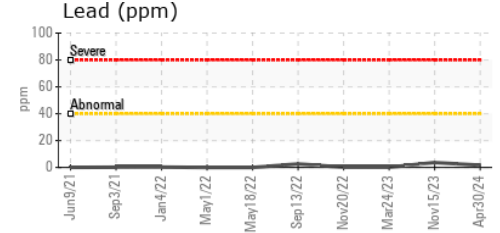
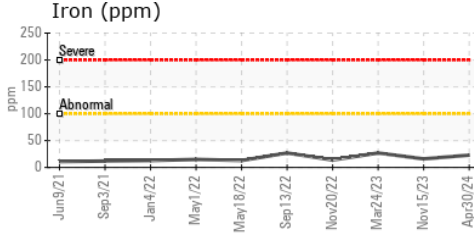


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	12.3	14.2	15.6

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	VLITE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	15.2	15.4	14.0

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0080092  
**Lab Number** : 02636841  
**Unique Number** : 5786003  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**GFL Environmental - 577 - First Class**  
 8540 Chilliwack Mountain Rd,  
 Chilliwack, BC  
 CA V2R 3W8  
 Contact: Derek Jessop  
 djessop@gflenv.com  
 T: (604)798-5301  
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.