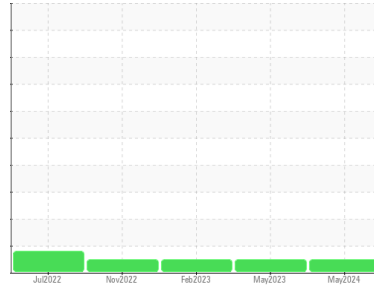




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**401106**

Component

**Diesel Engine**

Fluid

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

## DIAGNOSIS

### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>GFL0094972</b>	GFL0080147	GFL0044763
Sample Date	Client Info			<b>29 May 2024</b>	29 May 2023	08 Feb 2023
Machine Age	hrs	Client Info		<b>24837</b>	23644	23355
Oil Age	hrs	Client Info		<b>600</b>	600	600
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	>5		<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 D5185(m)	>100	<b>10</b>	10	6
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>3</b>	2	1
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	<1	1
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	<1
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

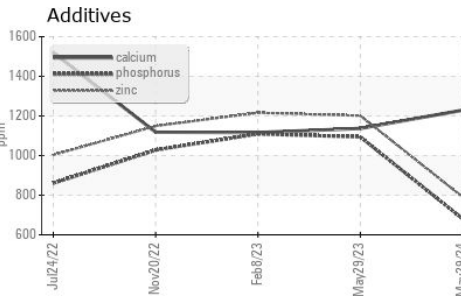
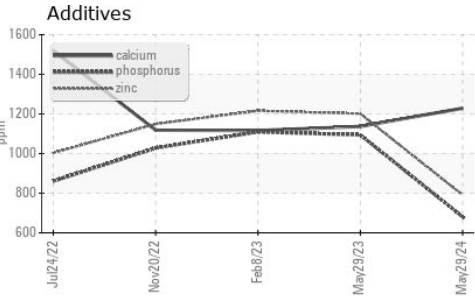
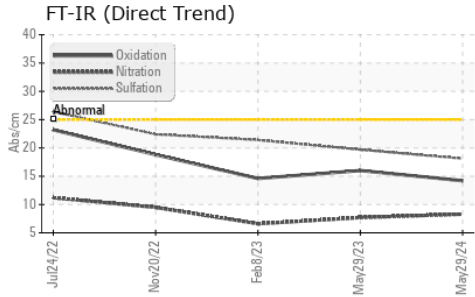
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<b>101</b>	9	3
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>101</b>	61	59
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>595</b>	973	972
Calcium	ppm	ASTM D5185(m)	1070	<b>1229</b>	1137	1116
Phosphorus	ppm	ASTM D5185(m)	1150	<b>681</b>	1094	1109
Zinc	ppm	ASTM D5185(m)	1270	<b>791</b>	1201	1216
Sulfur	ppm	ASTM D5185(m)	2060	<b>2571</b>	2673	2747
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>7</b>	4	3
Sodium	ppm	ASTM D5185(m)		<b>3</b>	2	3
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>0.2</b>	0.3	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.3</b>	7.7	6.6
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>18.1</b>	19.7	21.4



# OIL ANALYSIS REPORT

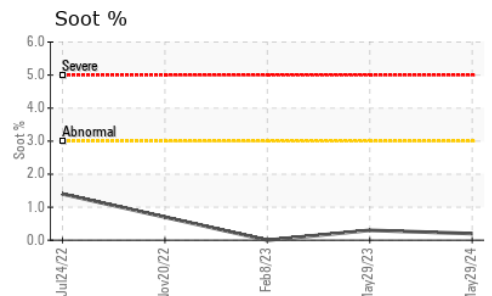
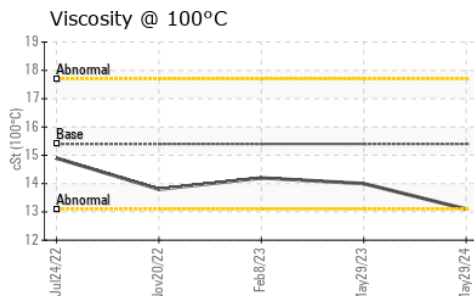
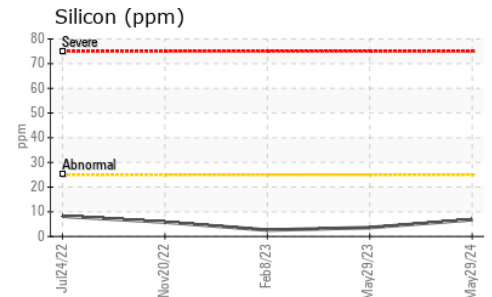
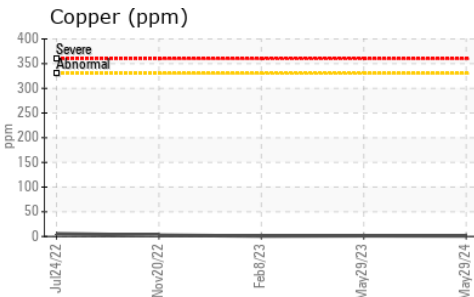
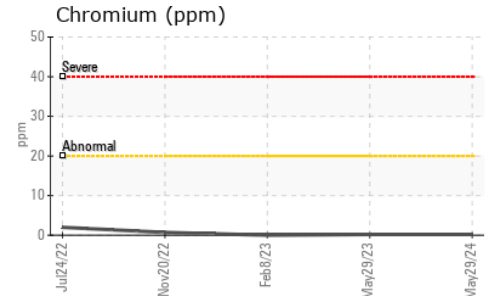
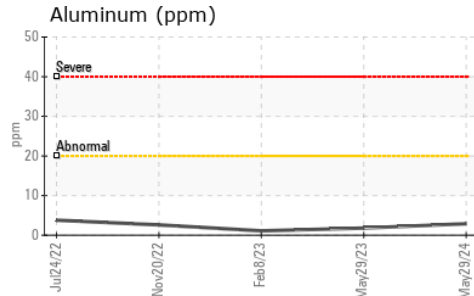
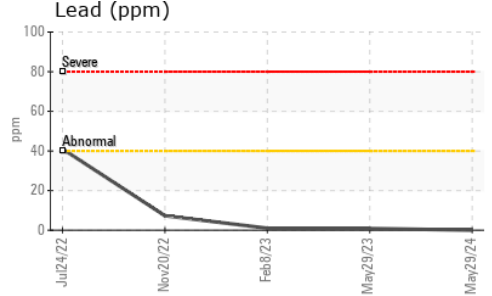
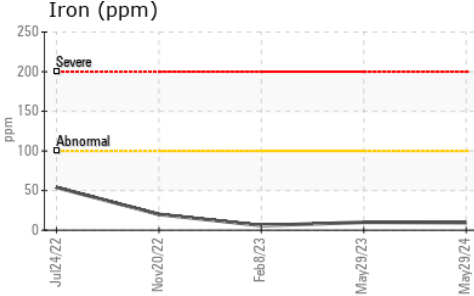


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>14.2</b>	16.0	14.6

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>13.1</b>	14.0	14.2

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0094972  
**Lab Number** : 02647532  
**Unique Number** : 5813084  
**Test Package** : MOB 1  
**Received** : 12 Jul 2024  
**Tested** : 12 Jul 2024  
**Diagnosed** : 15 Jul 2024 - Kevin Marson

**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.