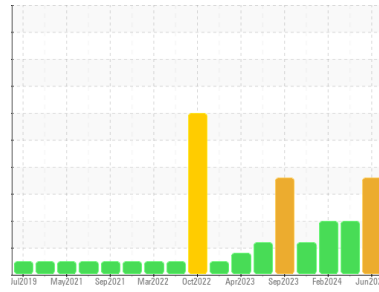




# OIL ANALYSIS REPORT

## Sample Rating Trend



GLYCOL



Machine Id

**401024**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**

### DIAGNOSIS

#### ● Recommendation

We advise that you check for the source of the coolant leak. The oil 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 light concentration of glycol present 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. 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>GFL0112432</b>	GFL0117296	GFL0112414
Sample Date	Client Info			<b>27 Jun 2024</b>	02 May 2024	15 Feb 2024
Machine Age	kms	Client Info		<b>567778</b>	20662	20083
Oil Age	kms	Client Info		<b>0</b>	582	619
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	▲ 4	▲ 4.2
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>110	<b>17</b>	26	30
Chromium	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>3</b>	5	5
Lead	ppm	ASTM D5185(m)	>45	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>85	<b>10</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	0	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)	1	<b>3</b>	2	<1
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>61</b>	64	64
Manganese	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>891</b>	922	883
Calcium	ppm	ASTM D5185(m)	1070	<b>1012</b>	1025	1020
Phosphorus	ppm	ASTM D5185(m)	1150	<b>935</b>	944	958
Zinc	ppm	ASTM D5185(m)	1270	<b>1137</b>	1133	1112
Sulfur	ppm	ASTM D5185(m)	2060	<b>2363</b>	2298	2424
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

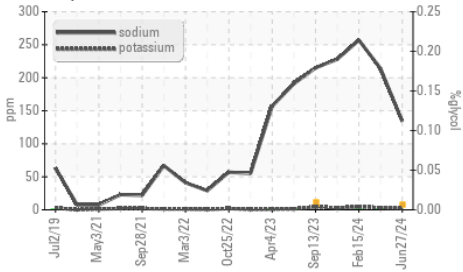
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	<b>4</b>	7	5
Sodium	ppm	ASTM D5185(m)		● <b>134</b>	● 214	● 257
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	3	4
Glycol	%	ASTM D7922*		▲ <b>0.01</b>	0.0	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>0.5</b>	0.8	0.9
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.1</b>	11.0	11.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.1</b>	23.5	23.4

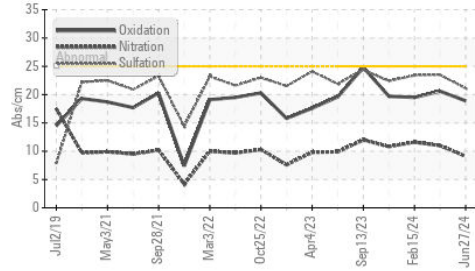


# OIL ANALYSIS REPORT

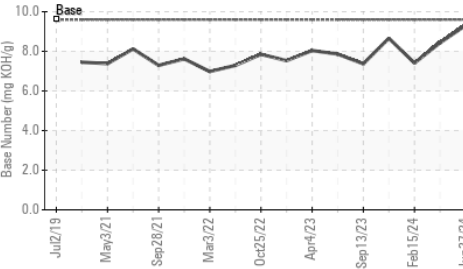
## Glycol Contamination



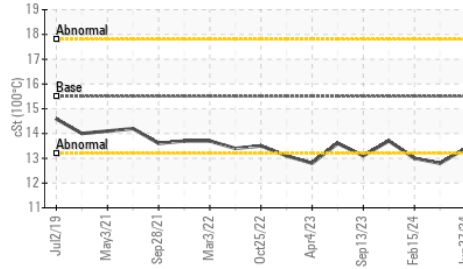
## FT-IR (Direct Trend)



## Base Number



## Viscosity @ 100°C



## Viscosity @ 100°C



## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	18.9	20.6	19.5
Base Number (BN)	mg KOH/g ASTM D2896*	9.6	9.31	8.43	7.41

## VISUAL

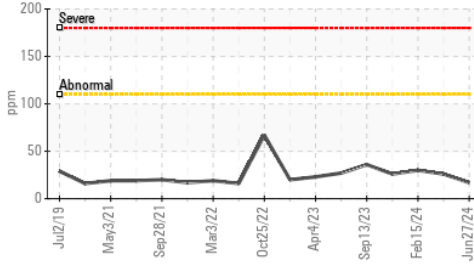
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*	NEG	NEG	NEG	NEG

## FLUID PROPERTIES

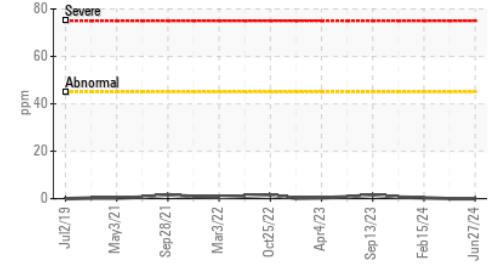
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.5	13.4	12.8	13.0

## GRAPHS

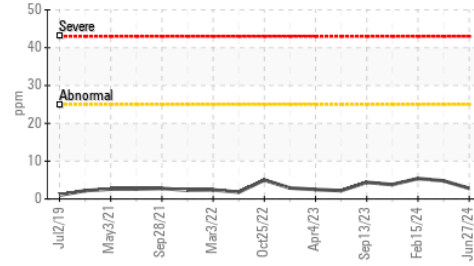
### Iron (ppm)



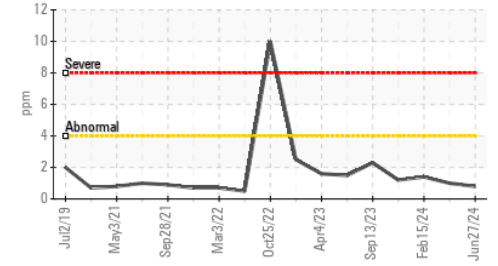
### Lead (ppm)



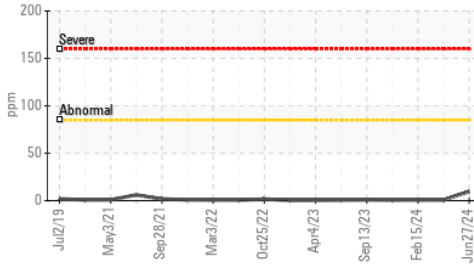
### Aluminum (ppm)



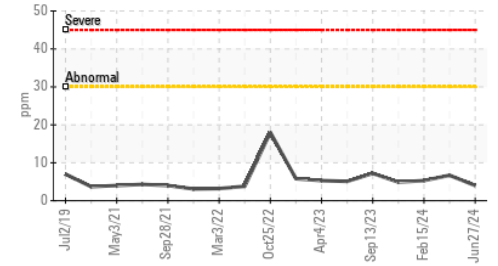
### Chromium (ppm)



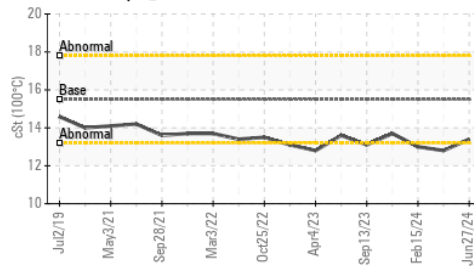
### Copper (ppm)



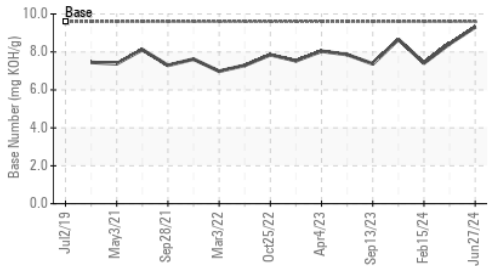
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0112432  
**Lab Number** : 02645716  
**Unique Number** : 5803255  
**Test Package** : MOB 2 ( Additional Tests: Glycol )  
**Received** : 05 Jul 2024  
**Tested** : 05 Jul 2024  
**Diagnosed** : 05 Jul 2024 - Wes Davis

**GFL Environmental - 550 - Rocky View County**  
 220 Carmek Blvd  
 Rocky View County, AB  
 CA T1X 1X1  
 Contact: GFL Calgary  
 calgarymaintenance@gflenv.com

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.

F: (403)369-6163