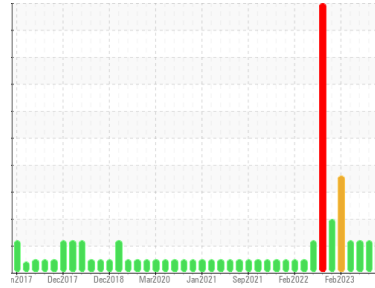




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**3719**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (10 GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. 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

Sodium and/or potassium levels remain high.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	<b>GFL0093754</b>	GFL0093767	GFL0079018	
Sample Date	Client Info	<b>29 Dec 2023</b>	07 Sep 2023	22 Aug 2023	
Machine Age	hrs	Client Info	<b>39473</b>	0	38896
Oil Age	hrs	Client Info	<b>0</b>	0	38896
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Changed	
Sample Status		<b>ABNORMAL</b>	ATTENTION	ABNORMAL	

## 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

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>75	<b>21</b>	7	19
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	<1	5
Lead	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>100	<b>5</b>	<1	4
Tin	ppm	ASTM D5185m	>4	<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>23</b>	15	21
Barium	ppm	ASTM D5185m	0	<b>10</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>77</b>	63	74
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>862</b>	878	986
Calcium	ppm	ASTM D5185m	1070	<b>977</b>	999	1084
Phosphorus	ppm	ASTM D5185m	1150	<b>1067</b>	999	1095
Zinc	ppm	ASTM D5185m	1270	<b>1124</b>	1190	1334
Sulfur	ppm	ASTM D5185m	2060	<b>3232</b>	3472	3796

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	<b>17</b>	7	15
Sodium	ppm	ASTM D5185m		<b>522</b>	221	458
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	<1	2
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG

## INFRA-RED

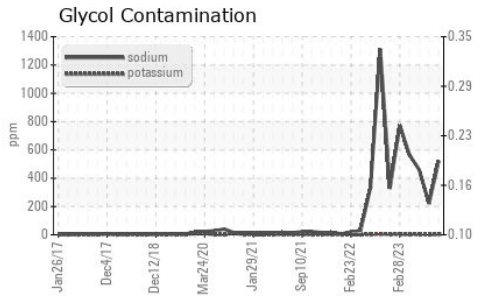
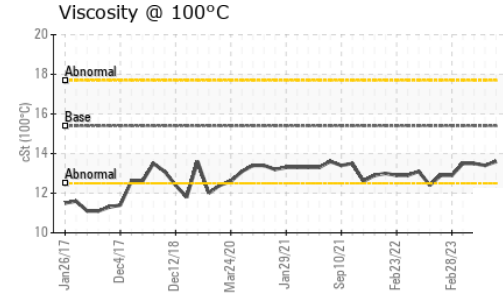
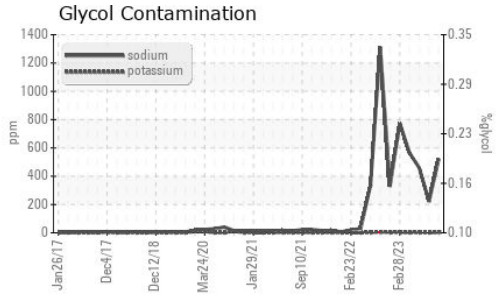
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>6	<b>0.6</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.2</b>	6.9	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	17.1	19.8

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.1</b>	12.4	15.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>9.5</b>	9.3	10.0



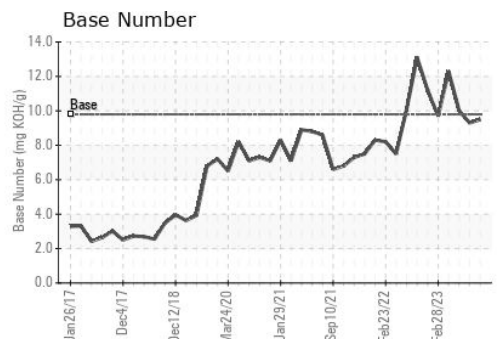
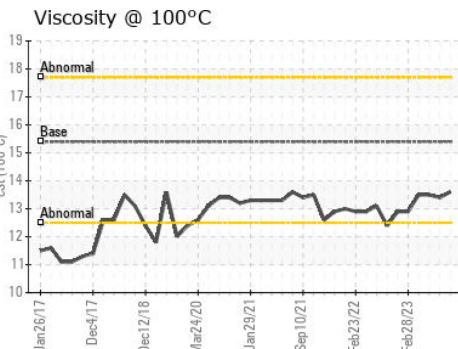
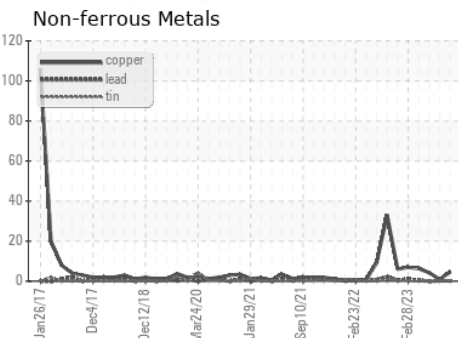
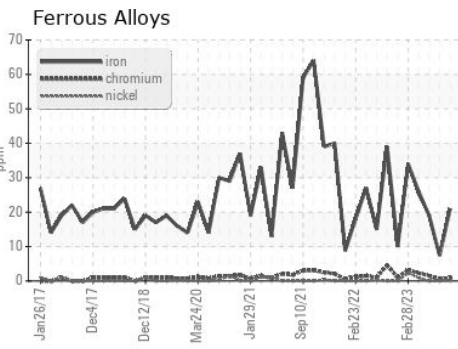
# OIL ANALYSIS REPORT



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>13.6</b>	13.4	13.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0093754 **Recieved** : 05 Jan 2024  
**Lab Number** : **06052740** **Diagnosed** : 09 Jan 2024  
**Unique Number** : 10818689 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 029 - Wytheville**  
 2390 North 4th Street  
 Wytheville, VA  
 US 24382  
 Contact: CHARLES CORVIN  
 charles.corvin@gflenv.com; canastasio@wearcheckusa.com  
 T: (276)223-4476  
 F: (276)223-1283

Certificate L2367  
 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)