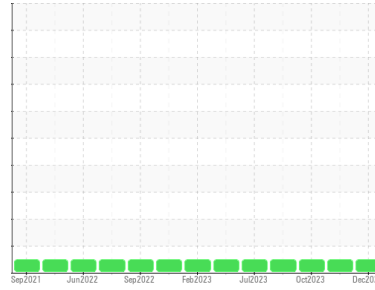




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**929092-260365**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (12 GAL)**

## DIAGNOSIS

### Recommendation

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

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>GFL0098312</b>	GFL0098280	GFL0098387	
Sample Date	Client Info	<b>11 Dec 2023</b>	22 Nov 2023	11 Oct 2023	
Machine Age	hrs	Client Info	<b>12238</b>	12212	934
Oil Age	hrs	Client Info	<b>700</b>	150	700
Oil Changed	Client Info	<b>Changed</b>	N/A	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 >165	<b>19</b>	9	20
Chromium	ppm ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>5</b>	2	2
Lead	ppm ASTM D5185m >150	<b>0</b>	<1	0
Copper	ppm ASTM D5185m >90	<b>&lt;1</b>	<1	1
Tin	ppm ASTM D5185m >5	<b>&lt;1</b>	0	0
Vanadium	ppm ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>4</b>	<1	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>58</b>	58	63
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>921</b>	952	969
Calcium	ppm ASTM D5185m 1070	<b>1022</b>	1033	1056
Phosphorus	ppm ASTM D5185m 1150	<b>1049</b>	1046	1008
Zinc	ppm ASTM D5185m 1270	<b>1244</b>	1255	1264
Sulfur	ppm ASTM D5185m 2060	<b>2898</b>	2902	3175

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	<b>5</b>	3	7
Sodium	ppm ASTM D5185m	<b>5</b>	12	13
Potassium	ppm ASTM D5185m >20	<b>2</b>	0	3

## INFRA-RED

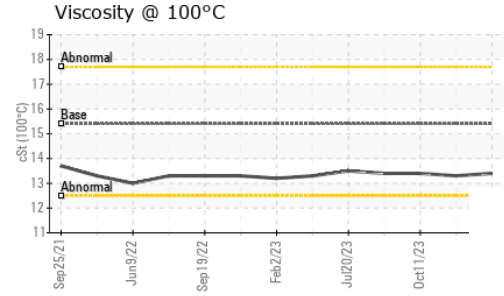
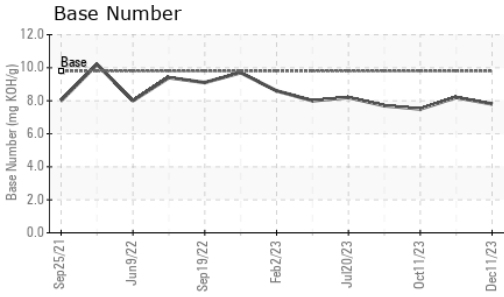
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >7.5	<b>1.2</b>	0.6	1.1
Nitration	Abs/cm *ASTM D7624 >20	<b>10.0</b>	7.0	9.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.8</b>	19.1	20.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.1</b>	14.0	15.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.8</b>	8.2	7.5



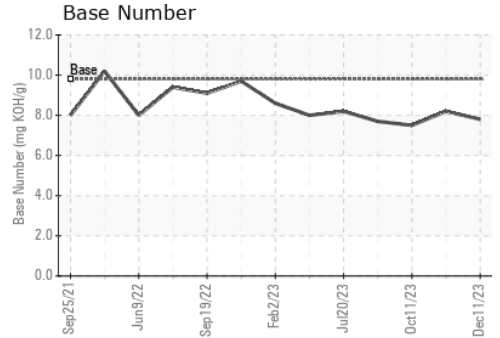
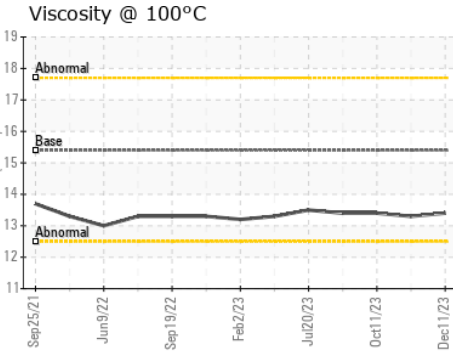
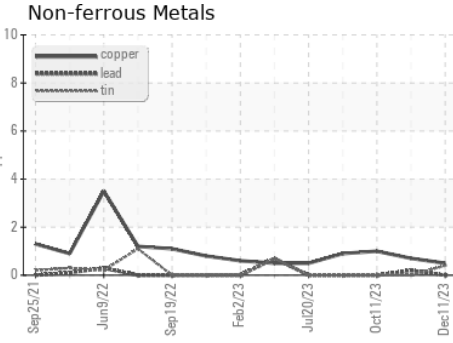
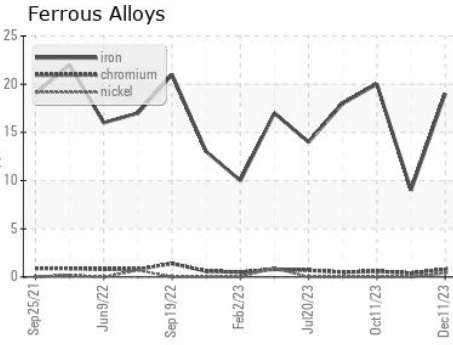
# OIL ANALYSIS REPORT



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>13.4</b>	13.3	13.4

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098312 **Recieved** : 19 Dec 2023  
**Lab Number** : **06039119** **Diagnosed** : 20 Dec 2023  
**Unique Number** : 10794348 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 822 - Springfield Hauling**  
 2120 West Bennett Street  
 Springfield, MO  
 US 65807  
 Contact: Dennis Moore  
 dennis.moore@gflenv.com  
 T: (417)403-3641  
 F:

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)