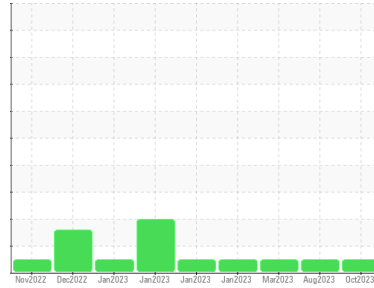




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**521018**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- 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>GFL0098473</b>	GFL0087041	GFL0069459
Sample Date	Client Info	<b>19 Oct 2023</b>	01 Aug 2023	14 Mar 2023
Machine Age	hrs	<b>0</b>	0	0
Oil Age	hrs	<b>500</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Changed	Not Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >6.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>8</b>	7	6
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	<1	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>10</b>	5	2
Lead	ppm ASTM D5185m >40	<b>2</b>	<1	0
Copper	ppm ASTM D5185m >330	<b>2</b>	2	6
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	0
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>2</b>	1	2
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>53</b>	58	50
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>839</b>	936	769
Calcium	ppm ASTM D5185m 1070	<b>988</b>	1088	1085
Phosphorus	ppm ASTM D5185m 1150	<b>966</b>	1023	878
Zinc	ppm ASTM D5185m 1270	<b>1112</b>	1274	984
Sulfur	ppm ASTM D5185m 2060	<b>2648</b>	3743	3133

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	3	3
Sodium	ppm ASTM D5185m	<b>6</b>	3	4
Potassium	ppm ASTM D5185m >20	<b>16</b>	4	0

## INFRA-RED

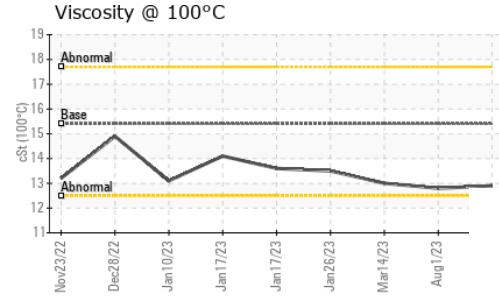
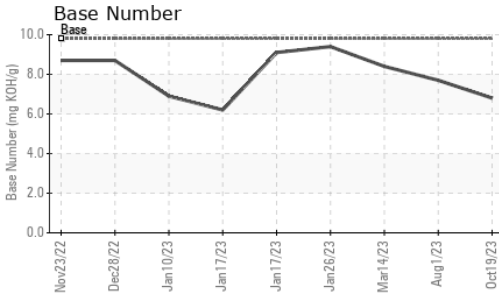
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>9.0</b>	8.3	7.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.7</b>	19.0	18.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>17.3</b>	15.5	14.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>6.8</b>	7.7	8.4



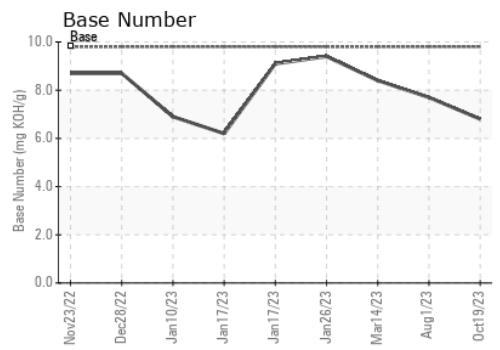
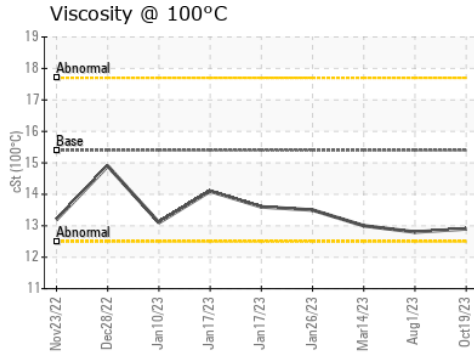
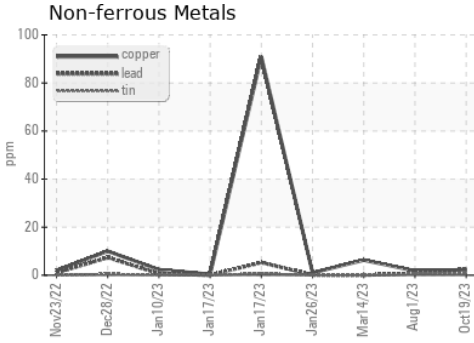
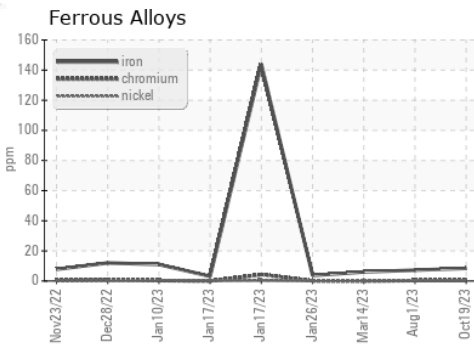
# OIL ANALYSIS REPORT



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>12.9</b>	12.8	13.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098473  
**Lab Number** : 05995235  
**Unique Number** : 10723595  
**Test Package** : FLEET  
**Received** : 01 Nov 2023  
**Diagnosed** : 02 Nov 2023  
**Diagnostician** : Wes Davis

**GFL Environmental - 846 - Mayfield Hauling**  
 3426 State Route 45  
 Mayfield, KY  
 US 42066  
 Contact: Jack Lindsey  
 jack.lindsey@gflenv.com  
 T: (270)970-3690  
 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)