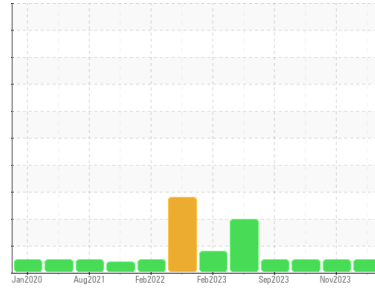




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**427075-402234**  
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>GFL0098316</b>	GFL0098286	GFL0079308
Sample Date	Client Info	<b>15 Dec 2023</b>	22 Nov 2023	13 Oct 2023
Machine Age	hrs	<b>39247</b>	39065	38801
Oil Age	hrs	<b>700</b>	600	700
Oil Changed	Client Info	<b>Not Chngd</b>	Changed	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 >120	<b>8</b>	26	34
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<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>1</b>	<1	2
Lead	ppm ASTM D5185m >40	<b>0</b>	2	2
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	3	2
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	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>1</b>	<1	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>56</b>	56	56
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>895</b>	926	871
Calcium	ppm ASTM D5185m 1070	<b>972</b>	1004	949
Phosphorus	ppm ASTM D5185m 1150	<b>1037</b>	999	889
Zinc	ppm ASTM D5185m 1270	<b>1209</b>	1210	1149
Sulfur	ppm ASTM D5185m 2060	<b>3030</b>	2814	2956

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>2</b>	2	2
Sodium	ppm ASTM D5185m	<b>&lt;1</b>	2	0
Potassium	ppm ASTM D5185m >20	<b>1</b>	0	1

## INFRA-RED

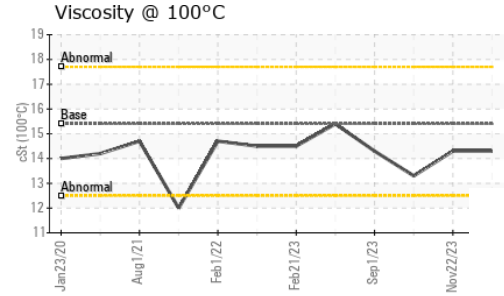
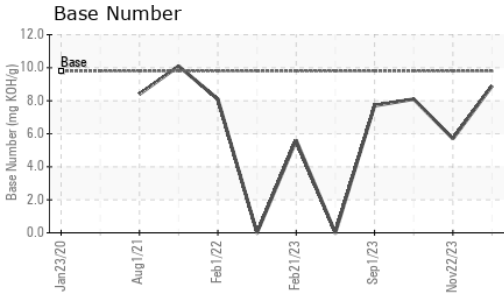
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>1.8</b>	3.9	1.8
Nitration	Abs/cm *ASTM D7624 >20	<b>5.9</b>	9.3	7.7
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.0</b>	25.7	20.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>12.7</b>	15.1	13.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.9</b>	5.7	8.1



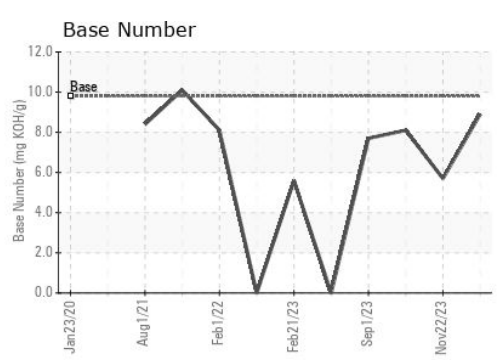
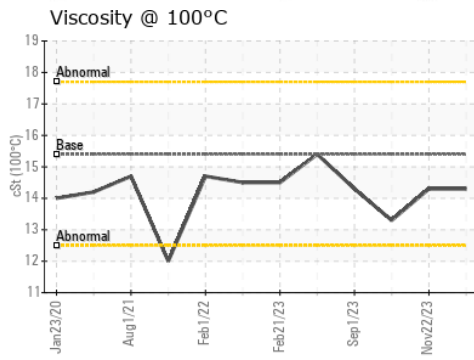
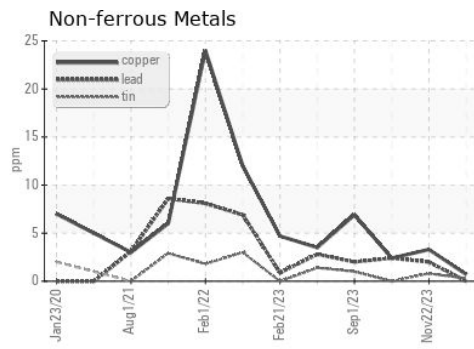
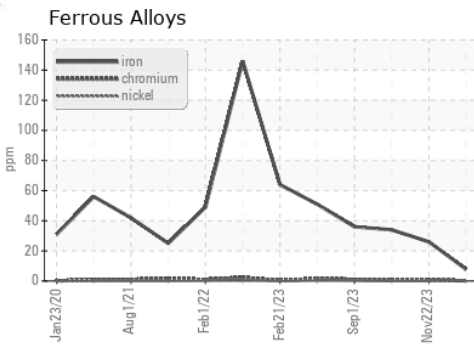
# OIL ANALYSIS REPORT



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>14.3</b>	14.3	13.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098316 **Received** : 19 Dec 2023  
**Lab Number** : 06039117 **Diagnosed** : 20 Dec 2023  
**Unique Number** : 10794346 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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

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)