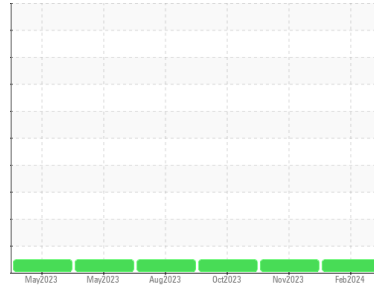




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**212023**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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>GFL0100923</b>	GFL0086825	GFL0086903	
Sample Date	Client Info	<b>06 Feb 2024</b>	28 Nov 2023	05 Oct 2023	
Machine Age	mls	Client Info	<b>59396</b>	59396	59396
Oil Age	mls	Client Info	<b>0</b>	600	59396
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not Changed	
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<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 >80	<b>4</b>	2	2
Chromium	ppm ASTM D5185m >5	<b>0</b>	0	0
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >30	<b>20</b>	<1	0
Lead	ppm ASTM D5185m >30	<b>0</b>	0	0
Copper	ppm ASTM D5185m >150	<b>0</b>	0	0
Tin	ppm ASTM D5185m >5	<b>0</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>6</b>	7	6
Barium	ppm ASTM D5185m 0	<b>0</b>	0	<1
Molybdenum	ppm ASTM D5185m 60	<b>62</b>	58	62
Manganese	ppm ASTM D5185m 0	<b>0</b>	0	0
Magnesium	ppm ASTM D5185m 1010	<b>948</b>	849	874
Calcium	ppm ASTM D5185m 1070	<b>1095</b>	1056	1031
Phosphorus	ppm ASTM D5185m 1150	<b>1053</b>	951	1003
Zinc	ppm ASTM D5185m 1270	<b>1308</b>	1107	1200
Sulfur	ppm ASTM D5185m 2060	<b>3238</b>	2893	3345

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>27</b>	3	5
Sodium	ppm ASTM D5185m	<b>&lt;1</b>	2	0
Potassium	ppm ASTM D5185m >20	<b>1</b>	0	2

## INFRA-RED

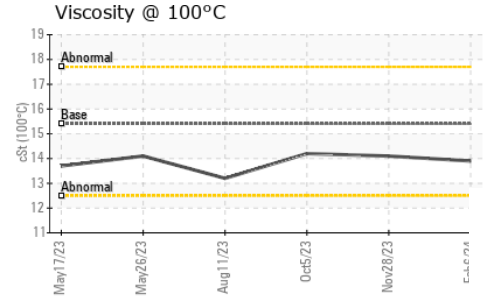
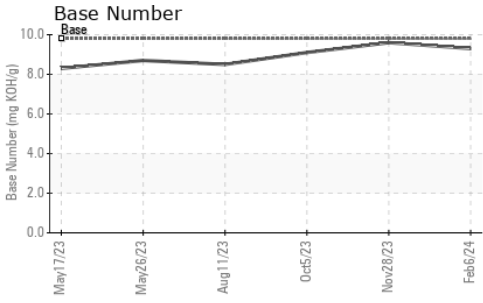
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>4.4</b>	4.5	4.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>16.9</b>	17.2	16.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>12.7</b>	12.9	12.4
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.3</b>	9.6	9.1



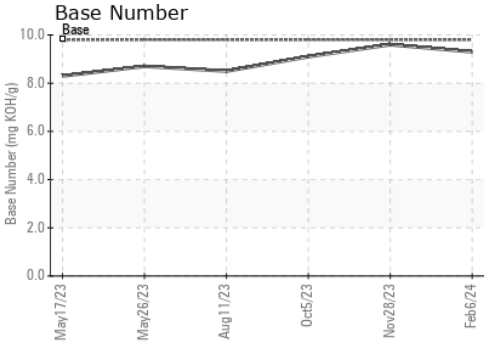
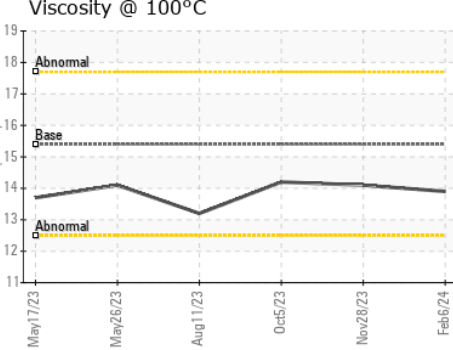
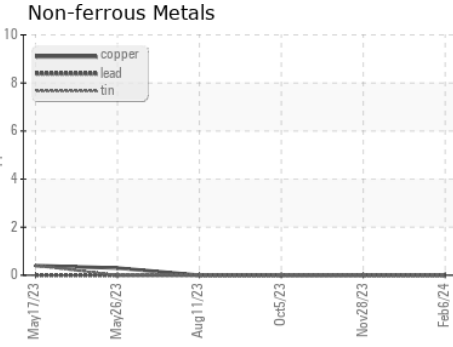
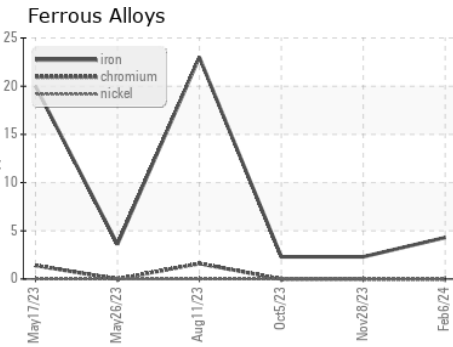
# OIL ANALYSIS REPORT



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>13.9</b>	14.1	14.2

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0100923  
**Lab Number** : 06085613  
**Unique Number** : 10873058  
**Test Package** : FLEET

**Received** : 12 Feb 2024  
**Tested** : 12 Feb 2024  
**Diagnosed** : 12 Feb 2024 - Wes Davis

**GFL Environmental - 419 - Metro Saginaw**  
 6950 N Michigan  
 Saginaw, MI  
 US 48604

Contact: Jeremy Hines  
 jhines@gflenv.com

T: (800)684-1277

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)