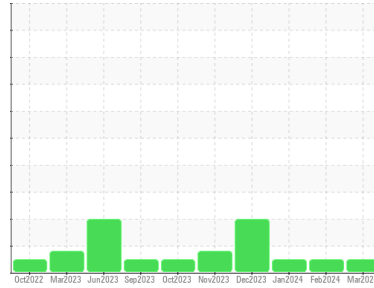




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**423031-402164**  
 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>GFL0109255</b>	GFL0109269	GFL0093573
Sample Date	Client Info	<b>01 Mar 2024</b>	13 Feb 2024	29 Jan 2024
Machine Age	hrs	<b>45232</b>	45114	44959
Oil Age	hrs	<b>411</b>	293	138
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
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>19</b>	19	10
Chromium	ppm ASTM D5185m >20	<b>2</b>	2	<1
Nickel	ppm ASTM D5185m >5	<b>&lt;1</b>	<1	0
Titanium	ppm ASTM D5185m >2	<b>17</b>	20	20
Silver	ppm ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	1	2
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	1	<1
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	1	<1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>17</b>	26	30
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>46</b>	45	45
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>810</b>	759	766
Calcium	ppm ASTM D5185m 1070	<b>1075</b>	1116	1186
Phosphorus	ppm ASTM D5185m 1150	<b>993</b>	941	900
Zinc	ppm ASTM D5185m 1270	<b>1174</b>	1069	1132
Sulfur	ppm ASTM D5185m 2060	<b>3260</b>	3422	3467

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	6	3
Sodium	ppm ASTM D5185m	<b>1</b>	0	0
Potassium	ppm ASTM D5185m >20	<b>2</b>	2	3

## INFRA-RED

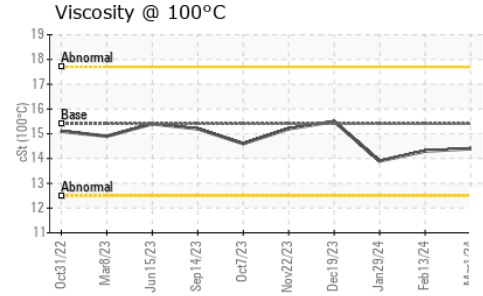
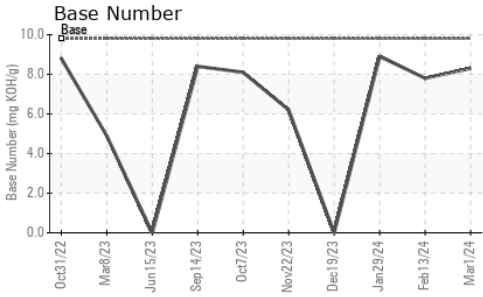
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>2.3</b>	1.8	0.9
Nitration	Abs/cm *ASTM D7624 >20	<b>8.0</b>	7.2	5.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>22.4</b>	20.7	18.8

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.9</b>	13.4	13.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.3</b>	7.8	8.9



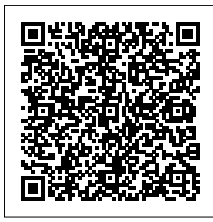
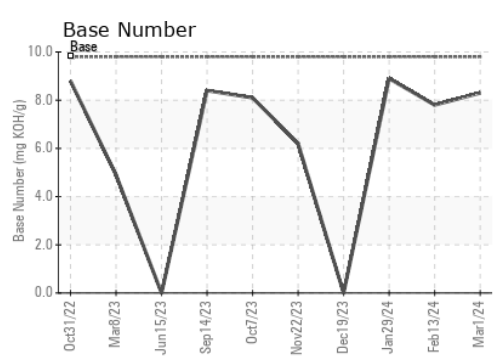
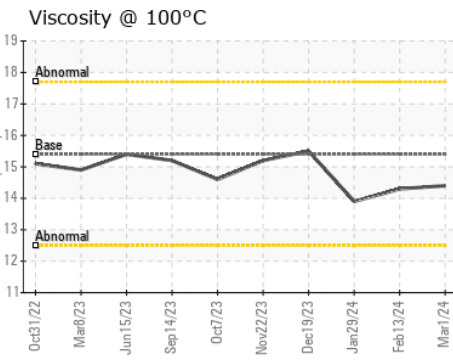
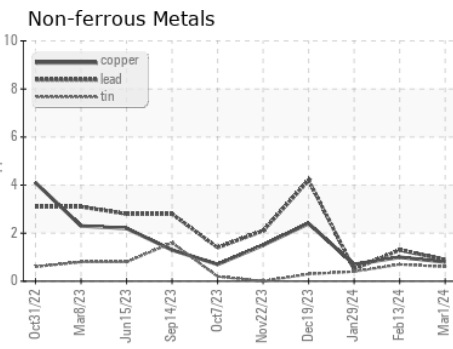
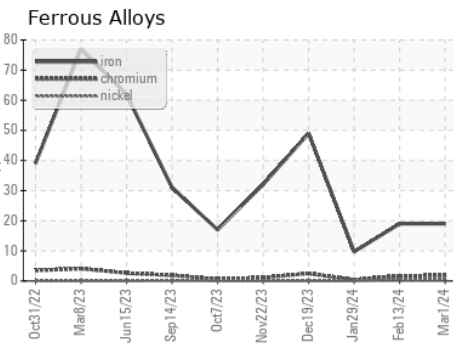
# OIL ANALYSIS REPORT



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>14.4</b>	14.3	13.9

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0109255 **Received** : 04 Mar 2024  
**Lab Number** : **06107262** **Tested** : 05 Mar 2024  
**Unique Number** : 10910759 **Diagnosed** : 05 Mar 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 891 - Oklahoma City Hauling**  
 1001 South Rockwell  
 Oklahoma City, OK  
 US 73128  
 Contact: Andy Smith  
 andrew.smith@gflenv.com  
 T: (405)306-1651  
 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)