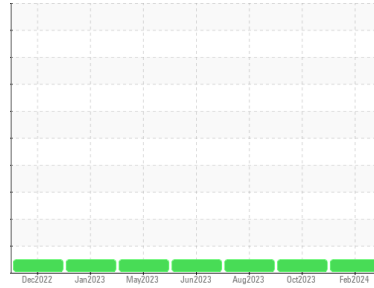




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**911043**  
 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>GFL0101070</b>	GFL0092772	GFL0080829
Sample Date	Client Info		<b>12 Feb 2024</b>	31 Oct 2023	28 Aug 2023
Machine Age	hrs	Client Info	<b>3953</b>	3953	3885
Oil Age	hrs	Client Info	<b>3099</b>	3168	3885
Oil Changed	Client Info		<b>N/A</b>	N/A	Not Changd
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>7</b>	13	27
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>1</b>	1	4
Lead	ppm	ASTM D5185m >40	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>6</b>	2	4
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>3</b>	2	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	4	0
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	59	71
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>915</b>	841	1055
Calcium	ppm	ASTM D5185m 1070	<b>1043</b>	993	1157
Phosphorus	ppm	ASTM D5185m 1150	<b>1012</b>	861	1016
Zinc	ppm	ASTM D5185m 1270	<b>1146</b>	1122	1316
Sulfur	ppm	ASTM D5185m 2060	<b>3505</b>	2829	2865

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	5	5
Sodium	ppm	ASTM D5185m	<b>0</b>	0	6
Potassium	ppm	ASTM D5185m >20	<b>2</b>	3	<1

## INFRA-RED

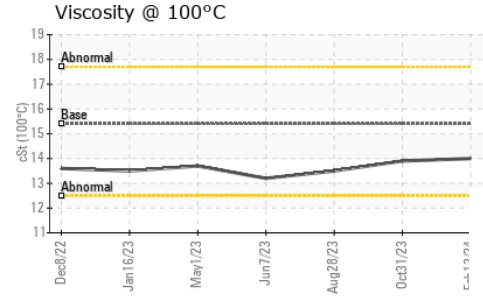
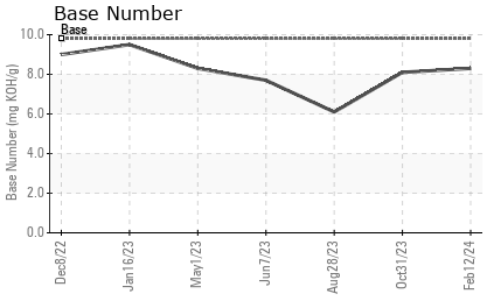
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.4</b>	0.5	1
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.2</b>	6.5	9.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.5</b>	19.0	20.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.8</b>	14.3	16.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.3</b>	8.1	6.1



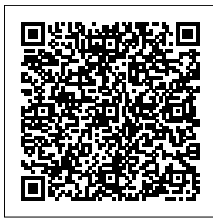
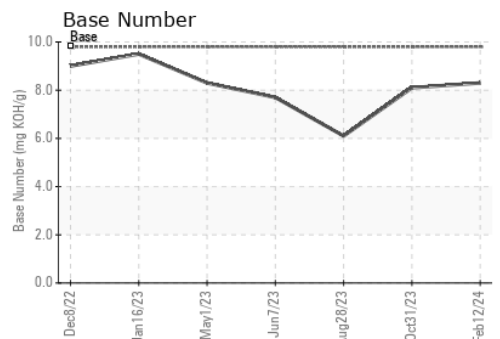
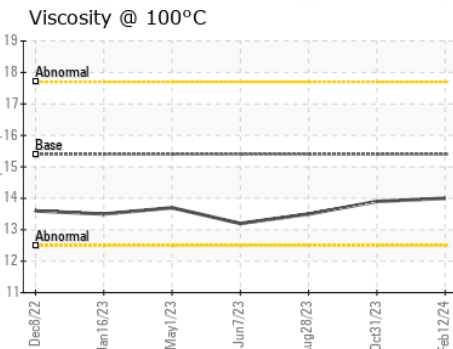
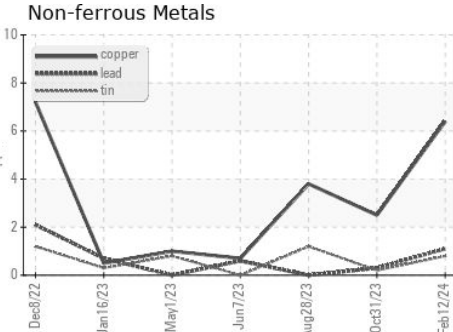
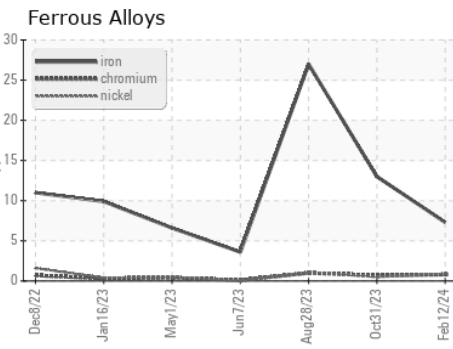
# OIL ANALYSIS REPORT



PARAMETER	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>14.0</b>	13.9	13.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0101070 **Received** : 15 Feb 2024  
**Lab Number** : 06090812 **Tested** : 19 Feb 2024  
**Unique Number** : 10883665 **Diagnosed** : 19 Feb 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 455 - Flint**  
 2051 W. Bristol Rd  
 Flint Township, MI  
 US 48507  
 Contact: MARK WOMBLE  
 mwomble@gflenv.com  
 T: (586)825-9514  
 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)