



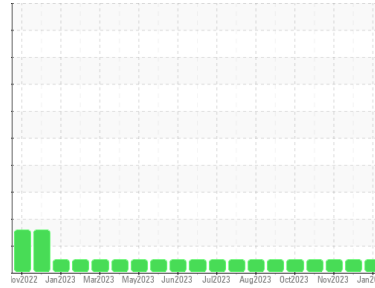
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**413038**  
 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>GFL0110904</b>	GFL0090931	GFL0103033
Sample Date	Client Info		<b>25 Jan 2024</b>	21 Dec 2023	28 Nov 2023
Machine Age	hrs	Client Info	<b>2992</b>	2852	2686
Oil Age	hrs	Client Info	<b>140</b>	166	0
Oil Changed	Client Info		<b>Changed</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>&lt;1</b>	10	4
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	4	1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	3	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>4</b>	6	3
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	1	1
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>9</b>	2	2
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	9	0
Molybdenum	ppm	ASTM D5185m 60	<b>64</b>	66	62
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>933</b>	983	983
Calcium	ppm	ASTM D5185m 1070	<b>1093</b>	1095	1034
Phosphorus	ppm	ASTM D5185m 1150	<b>1020</b>	1085	1119
Zinc	ppm	ASTM D5185m 1270	<b>1214</b>	1268	1351
Sulfur	ppm	ASTM D5185m 2060	<b>3264</b>	3261	3220

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>3</b>	7	4
Sodium	ppm	ASTM D5185m	<b>0</b>	0	2
Potassium	ppm	ASTM D5185m >20	<b>5</b>	11	7

## INFRA-RED

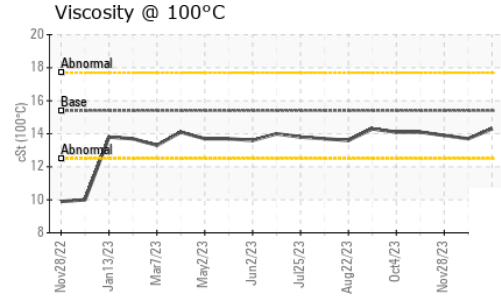
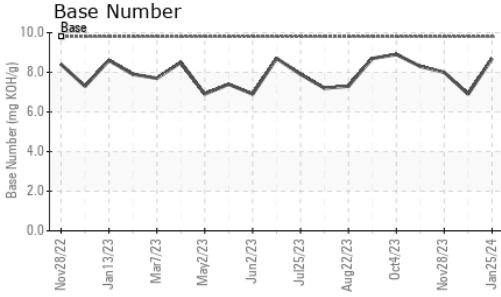
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.1</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.1</b>	8.9	7.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.3</b>	19.7	18.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.6</b>	16.8	15.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.7</b>	6.9	8.0



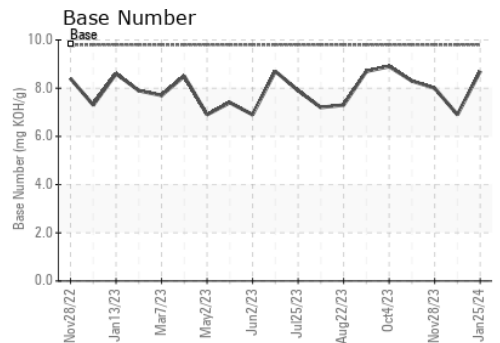
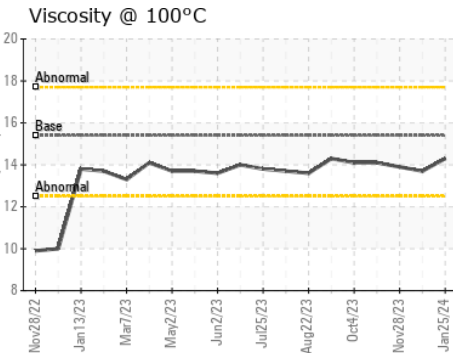
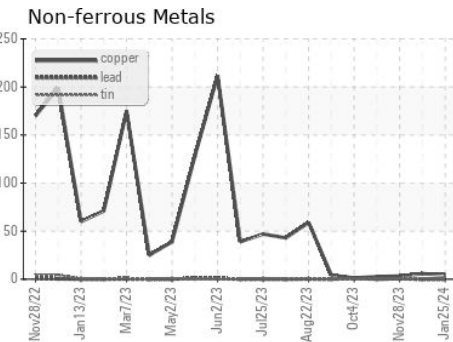
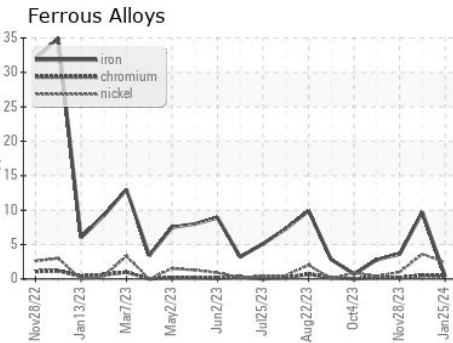
# OIL ANALYSIS REPORT



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	14.3	13.7

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0110904  
 Lab Number : 06077536  
 Unique Number : 10859627  
 Test Package : FLEET

GFL Environmental - 814 - Little Rock Hauling  
 4005 Hwy 161 N.  
 Little Rock, AR  
 US 72117  
 Contact: Brad Koenig  
 bkoenig@gflenv.com

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)