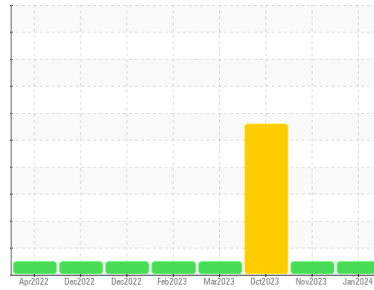




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**722017-305158**  
 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>GFL0098719</b>	GFL0098754	GFL0065504
Sample Date	Client Info		<b>16 Jan 2024</b>	17 Nov 2023	06 Oct 2023
Machine Age	hrs	Client Info	<b>21767</b>	21622	21585
Oil Age	hrs	Client Info	<b>150</b>	150	600
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## 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	▲ 0.06

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>11</b>	5	47
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	3	0
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	▲ 54
Copper	ppm	ASTM D5185m >330	<b>1</b>	<1	24
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	3
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	2	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	57	86
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>992</b>	956	942
Calcium	ppm	ASTM D5185m 1070	<b>993</b>	998	1074
Phosphorus	ppm	ASTM D5185m 1150	<b>1073</b>	1038	1046
Zinc	ppm	ASTM D5185m 1270	<b>1262</b>	1245	1265
Sulfur	ppm	ASTM D5185m 2060	<b>3144</b>	3085	3244

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	6	6
Sodium	ppm	ASTM D5185m	<b>3</b>	2	▲ 306
Potassium	ppm	ASTM D5185m >20	<b>1</b>	<1	▲ 20

## INFRA-RED

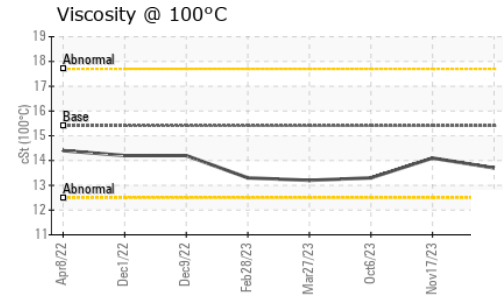
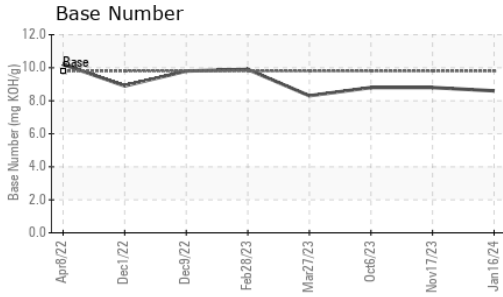
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.2	2
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.3</b>	5.0	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.0</b>	18.1	20.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.0</b>	13.7	13.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.6</b>	8.8	8.8



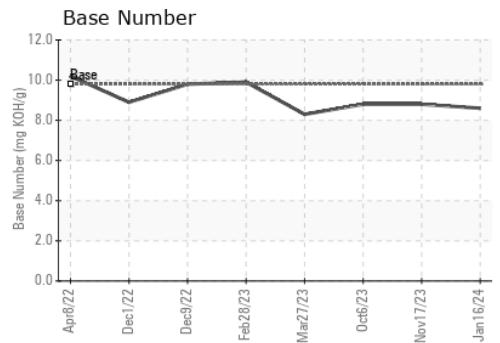
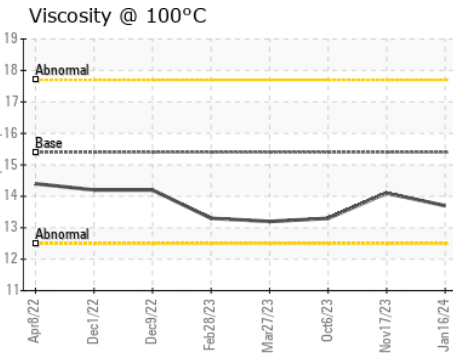
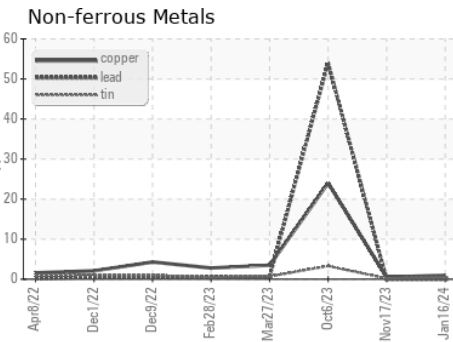
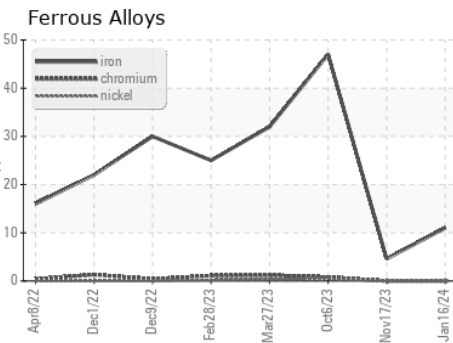
# OIL ANALYSIS REPORT



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	13.7	14.1

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0098719  
 Lab Number : 06064858  
 Unique Number : 10836240  
 Test Package : FLEET

GFL Environmental - 829 - Wilco Hauling  
 5054 Highway HH  
 Hartville, MO  
 US 65667  
 Contact: James Jones  
 james.jones@gflenv.com  
 T: (417)349-5006  
 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)