



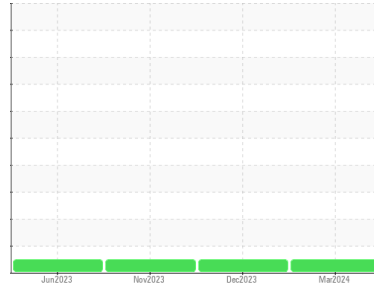
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**(BC24142)**  
Machine Id  
**4680M**  
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>GFL0108764</b>	GFL0105646	GFL0101590
Sample Date	Client Info		<b>20 Mar 2024</b>	07 Dec 2023	17 Nov 2023
Machine Age	hrs	Client Info	<b>15230</b>	14780	14614
Oil Age	hrs	Client Info	<b>15230</b>	14780	0
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	>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 >90	<b>7</b>	10	5
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	1	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</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>0</b>	0	<1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	9
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	55	58
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>946</b>	910	867
Calcium	ppm	ASTM D5185m 1070	<b>1042</b>	1039	1070
Phosphorus	ppm	ASTM D5185m 1150	<b>983</b>	875	967
Zinc	ppm	ASTM D5185m 1270	<b>1193</b>	1211	1168
Sulfur	ppm	ASTM D5185m 2060	<b>2882</b>	3406	3120

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	5	2
Sodium	ppm	ASTM D5185m	<b>3</b>	13	2
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	4

## INFRA-RED

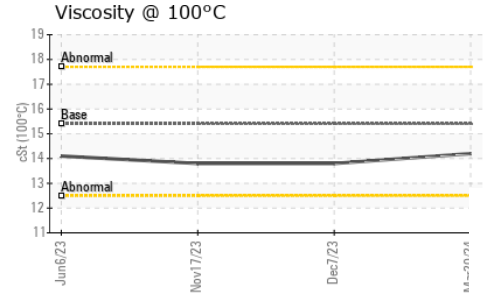
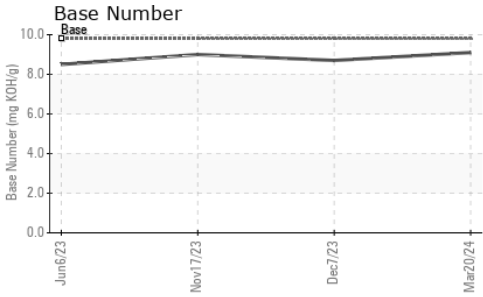
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.1</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.1</b>	6.8	6.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.9</b>	18.3	18.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.3</b>	14.6	14.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.1</b>	8.7	9.0



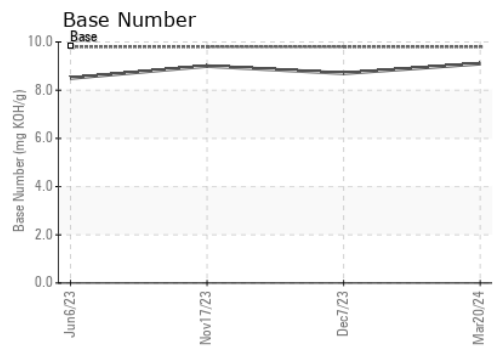
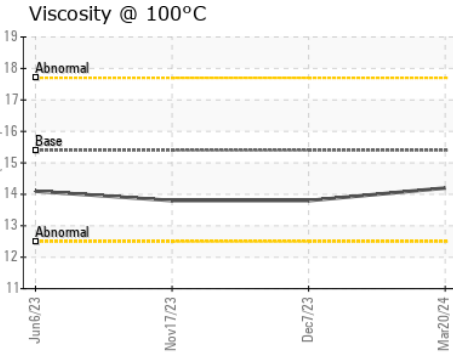
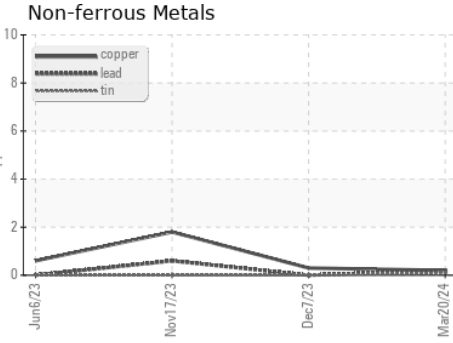
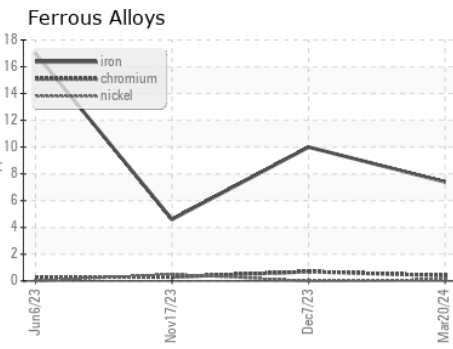
# OIL ANALYSIS REPORT



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	<b>14.2</b>	13.8

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0108764  
 Lab Number : **06126174**  
 Unique Number : 10940325  
 Test Package : FLEET

Received : 22 Mar 2024  
 Tested : 24 Mar 2024  
 Diagnosed : 24 Mar 2024 - Wes Davis

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
 Contact: Frank Wolak  
 fwolak@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)