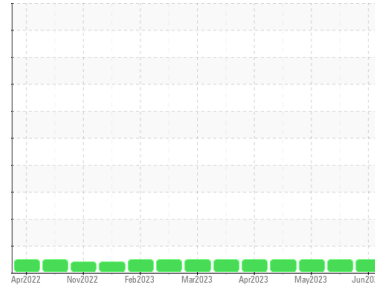




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**412032-22**

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	history 1	history 2
Sample Number	Client Info			<b>GFL0087841</b>	GFL0081191	GFL0081153
Sample Date	Client Info			<b>27 Jun 2023</b>	08 Jun 2023	19 May 2023
Machine Age	hrs	Client Info		<b>4961</b>	4836	4711
Oil Age	hrs	Client Info		<b>200</b>	200	200
Oil Changed	Client Info			<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	<b>5</b>	3	3
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	<b>3</b>	1	2
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>64</b>	61	56
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	1010	<b>1051</b>	1039	1023
Calcium	ppm	ASTM D5185m	1070	<b>1133</b>	1106	1088
Phosphorus	ppm	ASTM D5185m	1150	<b>1136</b>	1072	1002
Zinc	ppm	ASTM D5185m	1270	<b>1416</b>	1340	1303
Sulfur	ppm	ASTM D5185m	2060	<b>4030</b>	3843	3626

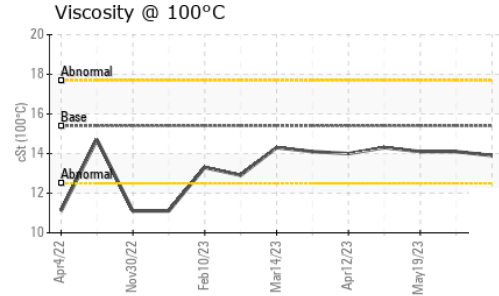
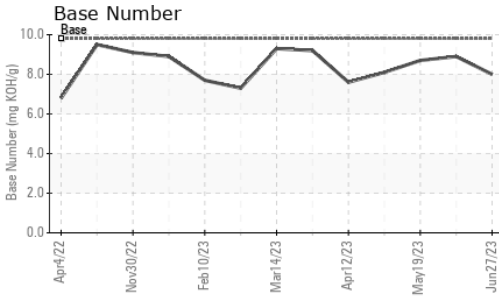
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	2	3
Sodium	ppm	ASTM D5185m		<b>2</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	4

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.1</b>	6.5	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	19.1	18.6

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.2</b>	14.8	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.0</b>	8.9	8.7



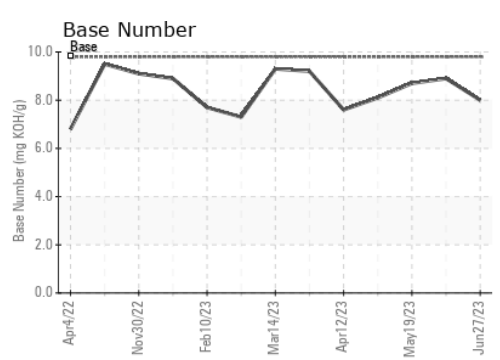
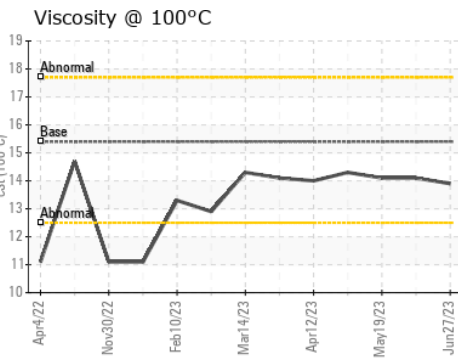
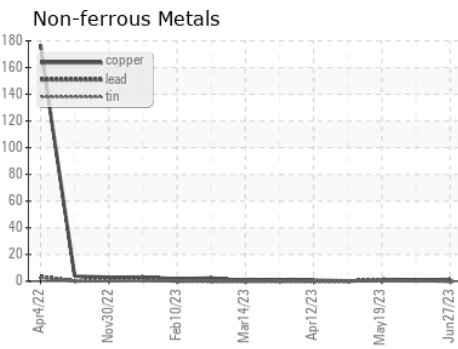
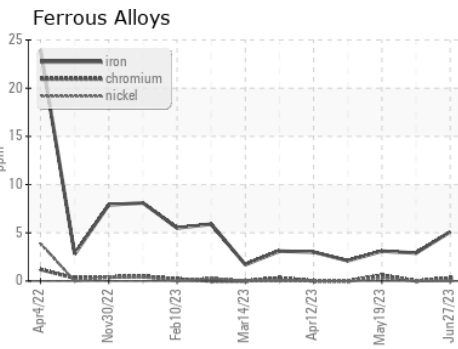
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.9</b>	14.1	14.1

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0087841 **Received** : 05 Jul 2023  
**Lab Number** : **05890015** **Diagnosed** : 05 Jul 2023  
**Unique Number** : 10545825 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: DEAN PEACE JR  
 dean.peace@gflenv.com  
 T:  
 F:

Certificate L2367  
 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)