



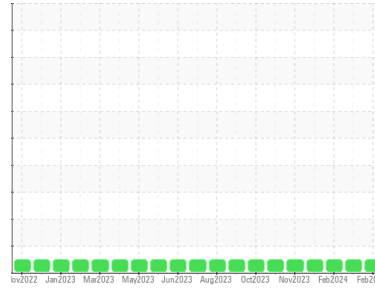
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**422090-29**  
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>GFL0099288</b>	GFL0099282	GFL0105548
Sample Date	Client Info		<b>29 Feb 2024</b>	22 Feb 2024	06 Feb 2024
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Not Chngd</b>	N/A	Not Chngd
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>12</b>	23	11
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>1</b>	2	2
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	7	3
Lead	ppm	ASTM D5185m >40	<b>3</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>5</b>	10	4
Tin	ppm	ASTM D5185m >15	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>54</b>	124	93
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>15</b>	28	18
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>111</b>	209	163
Calcium	ppm	ASTM D5185m 1070	<b>2048</b>	3010	2481
Phosphorus	ppm	ASTM D5185m 1150	<b>908</b>	1575	1119
Zinc	ppm	ASTM D5185m 1270	<b>1072</b>	1803	1456
Sulfur	ppm	ASTM D5185m 2060	<b>3772</b>	5543	4050

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	9	5
Sodium	ppm	ASTM D5185m	<b>2</b>	3	1
Potassium	ppm	ASTM D5185m >20	<b>12</b>	23	11

## INFRA-RED

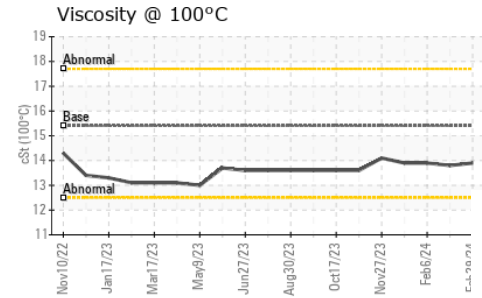
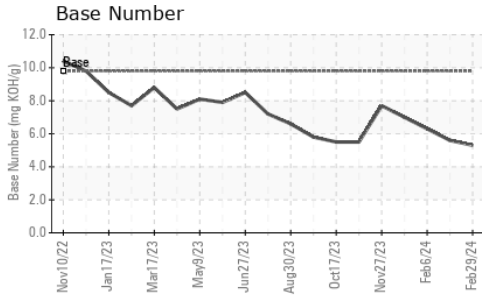
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.4</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.8</b>	9.6	9.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.1</b>	22.8	21.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.5</b>	18.2	17.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.3</b>	5.6	6.3



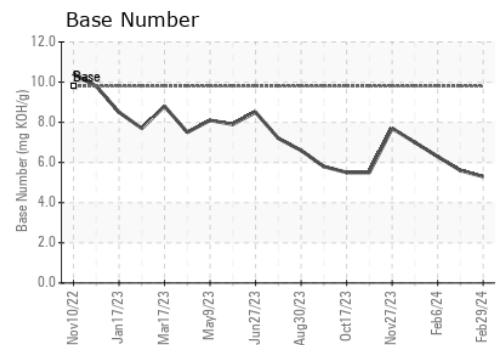
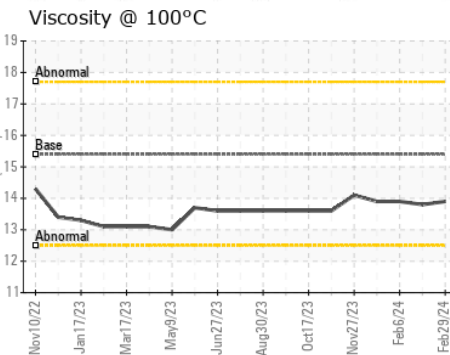
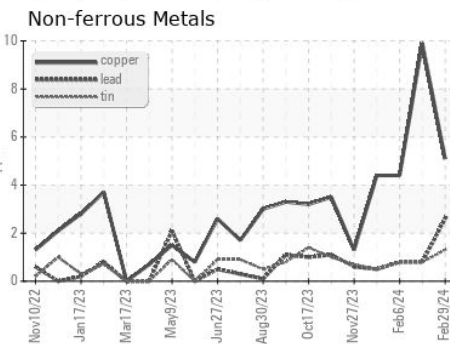
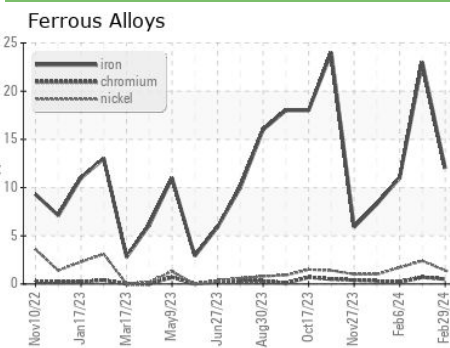
# OIL ANALYSIS REPORT



VISUAL	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	13.9	13.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0099288  
**Lab Number** : 06118091  
**Unique Number** : 10926924  
**Test Package** : FLEET

**Received** : 14 Mar 2024  
**Tested** : 15 Mar 2024  
**Diagnosed** : 18 Mar 2024 - Sean Felton

**GFL Environmental - 846 - Mayfield Hauling**  
 3426 State Route 45  
 Mayfield, KY  
 US 42066

Contact: Jack Lindsey  
 jack.lindsey@gflenv.com  
 T: (270)970-3690

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)

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