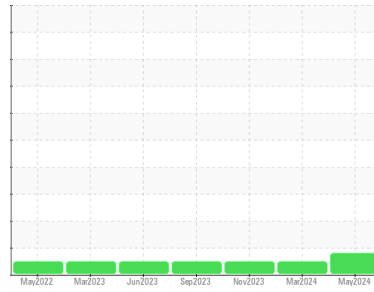




# OIL ANALYSIS REPORT

## Sample Rating Trend



**SOOT**



Machine Id  
**725008-1170**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### DIAGNOSIS

#### Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: Services completed )

#### Wear

All component wear rates are normal.

#### Contamination

There is an abnormal amount of solids and carbon present 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>GFL0116246</b>	GFL0116260	GFL0094861
Sample Date	Client Info			<b>09 May 2024</b>	14 Mar 2024	06 Nov 2023
Machine Age	mls	Client Info		<b>177911</b>	172517	169557
Oil Age	mls	Client Info		<b>5158</b>	2909	0
Oil Changed	Client Info			<b>Changed</b>	Not Changd	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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	>100	<b>49</b>	37	27
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>8</b>	4	4
Copper	ppm	ASTM D5185m	>330	<b>4</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>2</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>4</b>	6	2
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>65</b>	62	62
Manganese	ppm	ASTM D5185m	0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>912</b>	927	902
Calcium	ppm	ASTM D5185m	1070	<b>1122</b>	1097	1075
Phosphorus	ppm	ASTM D5185m	1150	<b>1033</b>	998	911
Zinc	ppm	ASTM D5185m	1270	<b>1256</b>	1194	1203
Sulfur	ppm	ASTM D5185m	2060	<b>3367</b>	3425	2958

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	4
Sodium	ppm	ASTM D5185m		<b>4</b>	3	0
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	3
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<1.0

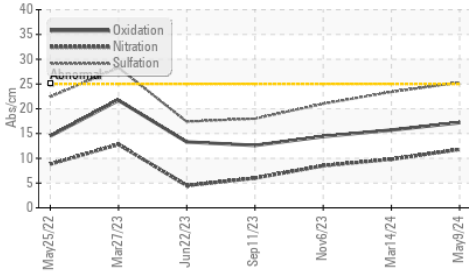
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>▲ 3.5</b>	2.4	1.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.8</b>	9.8	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.3</b>	23.4	21.0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.2</b>	15.7	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.7</b>	8.2	9.0

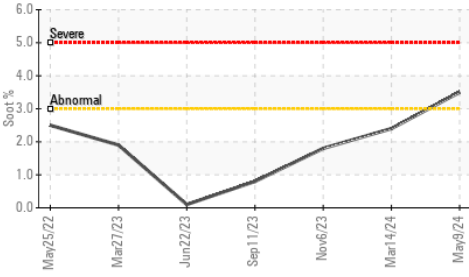


# OIL ANALYSIS REPORT

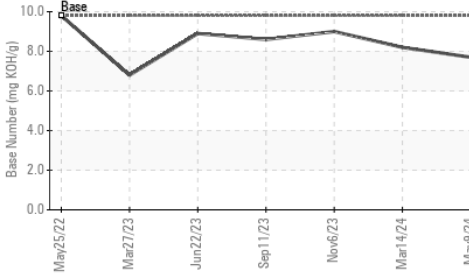
▲ FT-IR (Direct Trend)



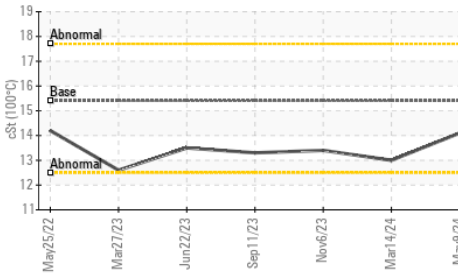
▲ Soot %



Base Number



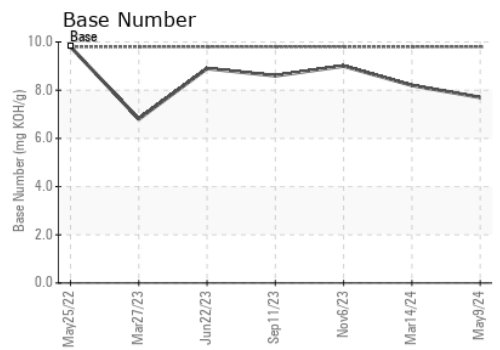
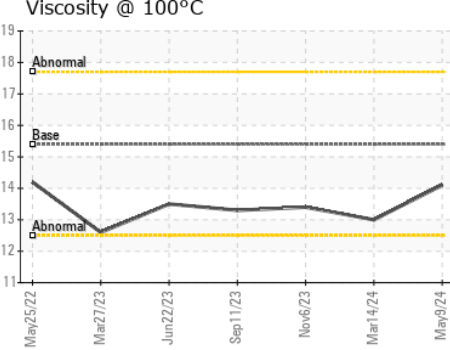
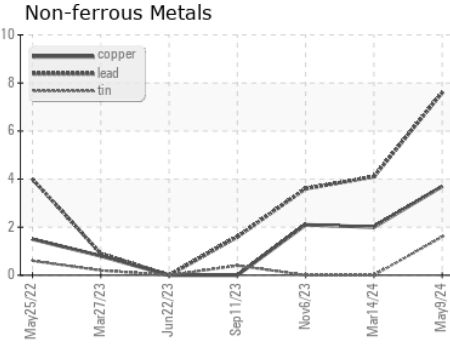
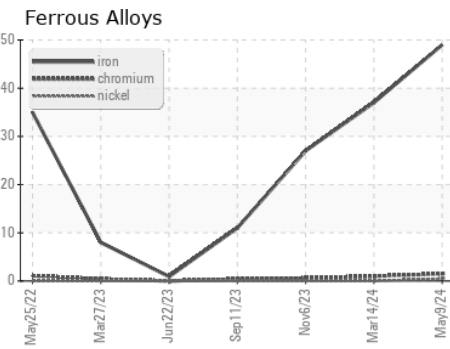
Viscosity @ 100°C



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	14.1	13.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116246 **Received** : 13 May 2024  
**Lab Number** : **06178158** **Tested** : 14 May 2024  
**Unique Number** : 11029484 **Diagnosed** : 15 May 2024 - Sean Felton  
**Test Package** : FLEET ( Additional Tests : FuelDilution )

**GFL Environmental - 625 - Harrison Hauling**  
 2480 S Clare Ave  
 Clare, MI 48617  
 Contact: Glenda Standen  
 gstanden@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)