



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**(BC80767)**  
Machine Id  
**412042**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: Serviced )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0116278</b>	GFL0094883	GFL0088290
Sample Date		Client Info		<b>18 Apr 2024</b>	05 Feb 2024	04 Oct 2023
Machine Age	hrs	Client Info		<b>5612</b>	5235	4651
Oil Age	hrs	Client Info		<b>377</b>	586	473
Filter Age	hrs	Client Info		<b>377</b>	586	473
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>7</b>	12	12
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>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	2	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	3	<1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

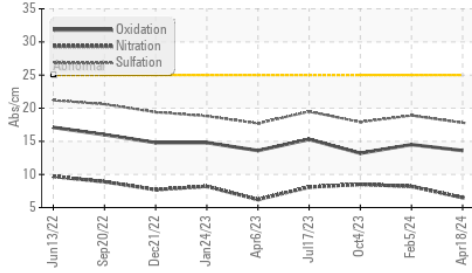
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	3	6
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.3</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.5</b>	8.2	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.8</b>	18.9	17.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

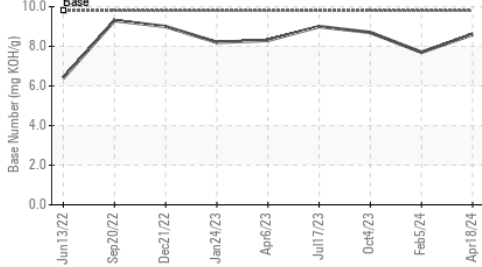
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	3	3
Boron	ppm	ASTM D5185m	0	<b>5</b>	2	4
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	60	57
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>871</b>	937	924
Calcium	ppm	ASTM D5185m	1070	<b>1059</b>	1041	1030
Phosphorus	ppm	ASTM D5185m	1150	<b>1079</b>	1020	967
Zinc	ppm	ASTM D5185m	1270	<b>1175</b>	1242	1214
Sulfur	ppm	ASTM D5185m	2060	<b>3313</b>	3065	2815
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.6</b>	14.5	13.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.6</b>	7.7	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.1</b>	12.7	12.8

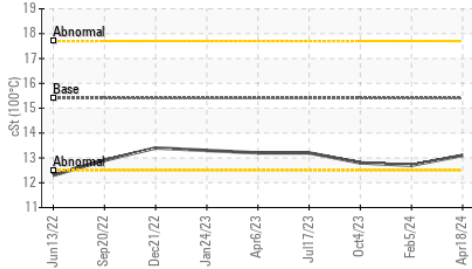
**FT-IR (Direct Trend)**



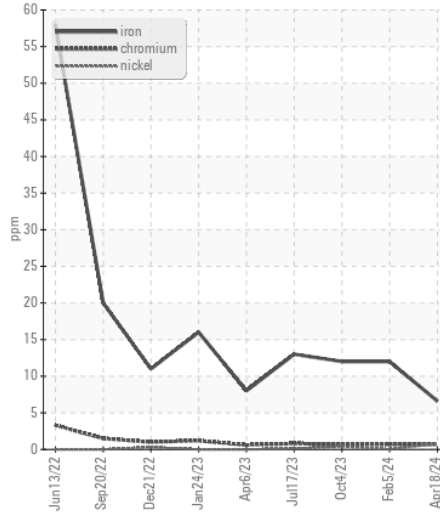
**Base Number**



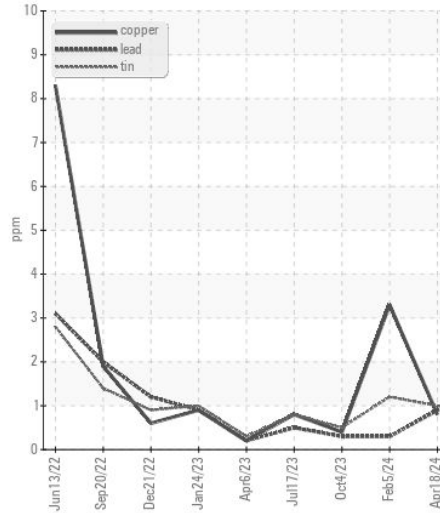
**Viscosity @ 100°C**



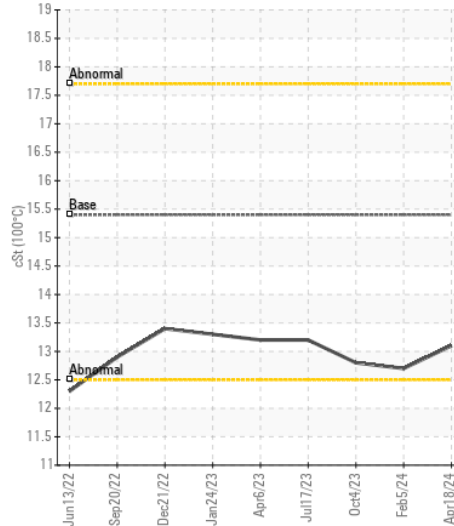
**Ferrous Alloys**



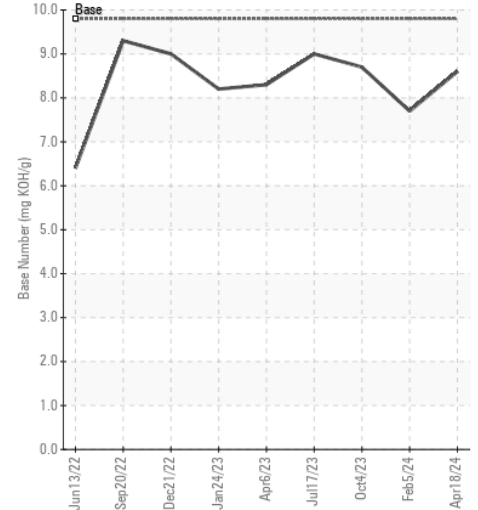
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116278  
**Lab Number** : 06156744  
**Unique Number** : 10992167  
**Test Package** : FLEET  
**Received** : 22 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 24 Apr 2024 - Sean Felton

**GFL Environmental - 625 - Harrison Hauling**  
 4102 Industrial Pkwy  
 Harrison, MI  
 US 48625  
 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)