



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

Machine Id  
**928072-205264**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0109194</b>	GFL0109136	GFL0109177
Sample Date		Client Info		<b>11 Apr 2024</b>	19 Mar 2024	01 Mar 2024
Machine Age	hrs	Client Info		<b>16799</b>	16663	16510
Oil Age	hrs	Client Info		<b>700</b>	300	700
Filter Age	hrs	Client Info		<b>700</b>	0	700
Oil Changed		Client Info		<b>Not Changd</b>	N/A	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	26	18
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m	>330	<b>9</b>	112	12
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	0
Vanadium	ppm	ASTM D5185m		<b>0</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.

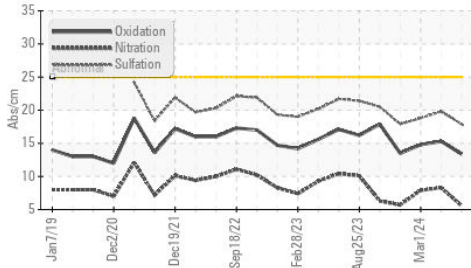
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	5	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.6</b>	8.3	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	19.8	18.8
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**

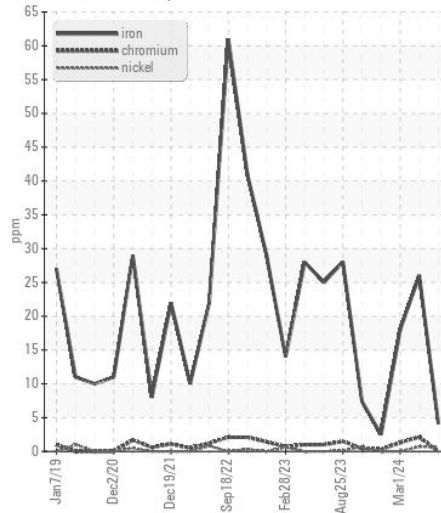
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	9	10
Boron	ppm	ASTM D5185m	0	<b>1</b>	0	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	60	<b>57</b>	65	56
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	2	1
Magnesium	ppm	ASTM D5185m	1010	<b>965</b>	915	872
Calcium	ppm	ASTM D5185m	1070	<b>1069</b>	1187	1023
Phosphorus	ppm	ASTM D5185m	1150	<b>1087</b>	1057	972
Zinc	ppm	ASTM D5185m	1270	<b>1292</b>	1237	1184
Sulfur	ppm	ASTM D5185m	2060	<b>3815</b>	2979	3167
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.4</b>	15.3	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.9</b>	7.3	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.7</b>	12.8	12.7

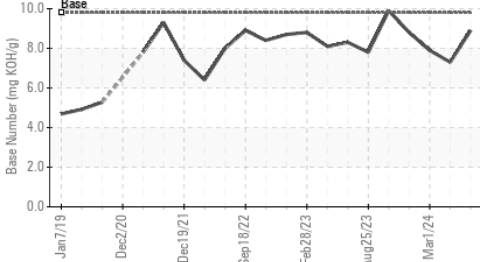
**FT-IR (Direct Trend)**



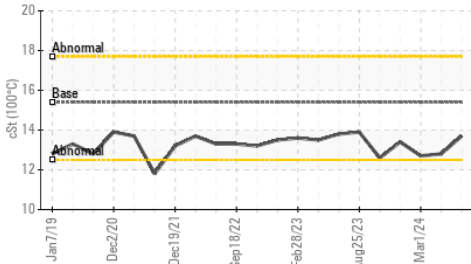
**Ferrous Alloys**



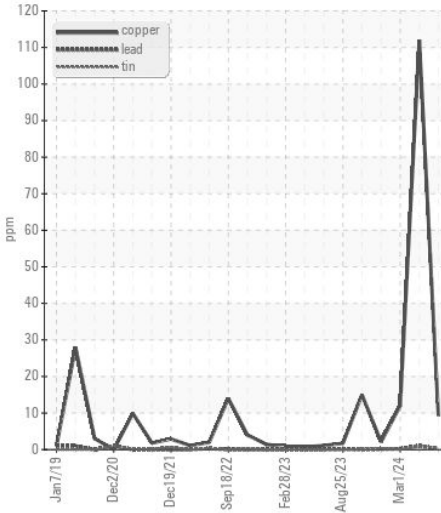
**Base Number**



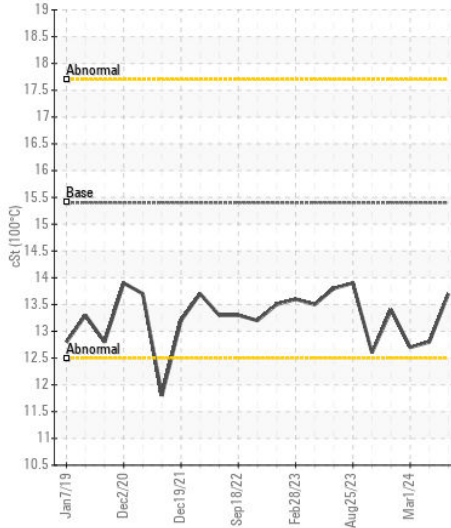
**Viscosity @ 100°C**



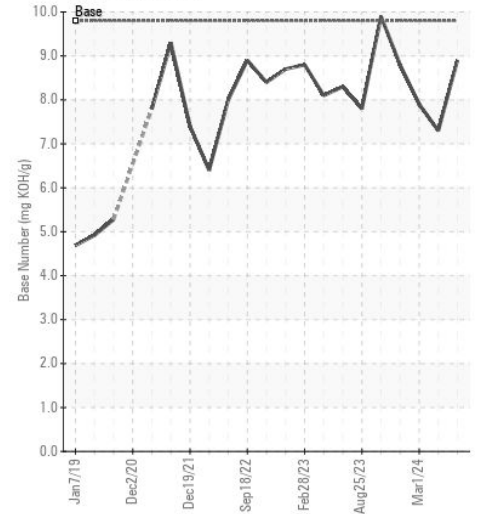
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0109194  
**Lab Number** : 06146430  
**Unique Number** : 10976508  
**Test Package** : FLEET

**Received** : 11 Apr 2024  
**Tested** : 12 Apr 2024  
**Diagnosed** : 12 Apr 2024 - Wes Davis

**GFL Environmental - 822 - Springfield Hauling**  
 2120 West Bennett Street  
 Springfield, MO  
 US 65807  
 Contact: Dennis Moore  
 dennis.moore@gflenv.com  
 T: (417)403-3641  
 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)